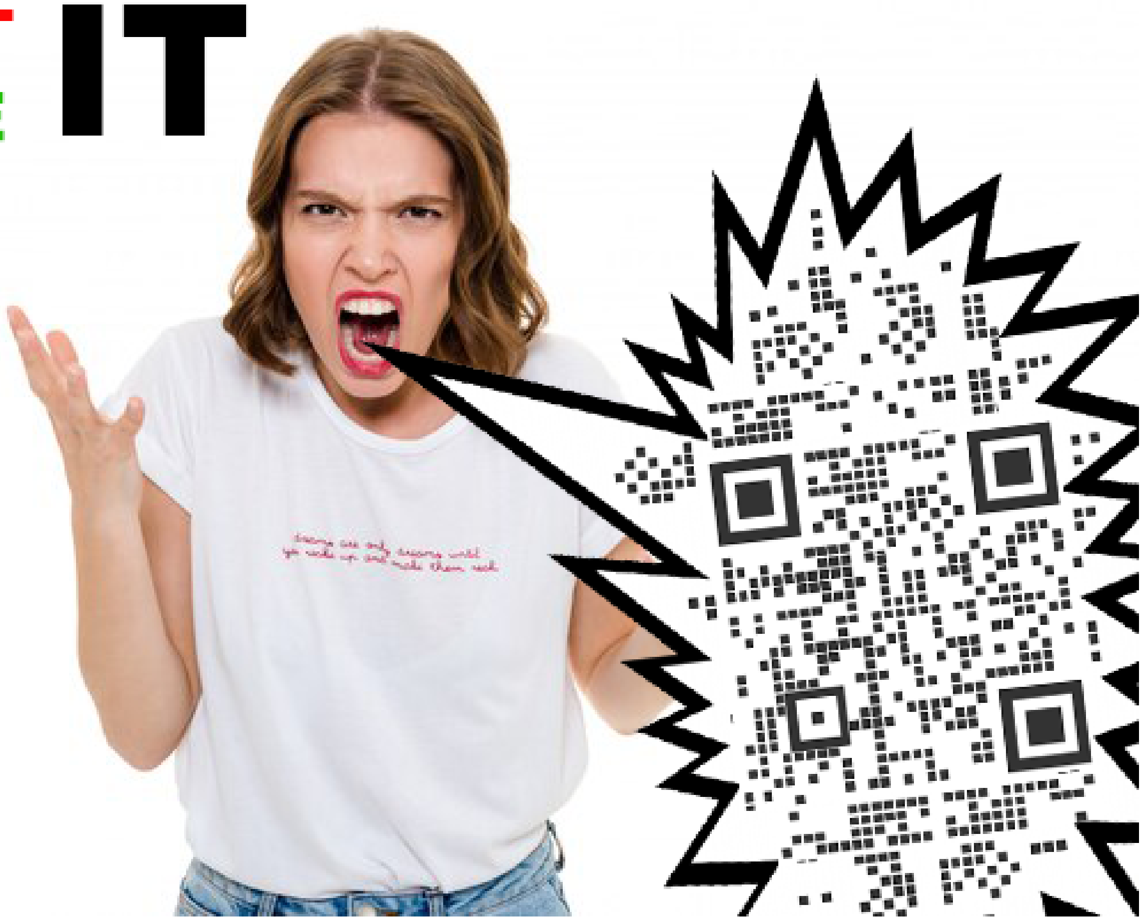
SHOUT
SHARE
IT



FOR THE PEOPLE
FOR EDVCATION
FOR SCIENCE

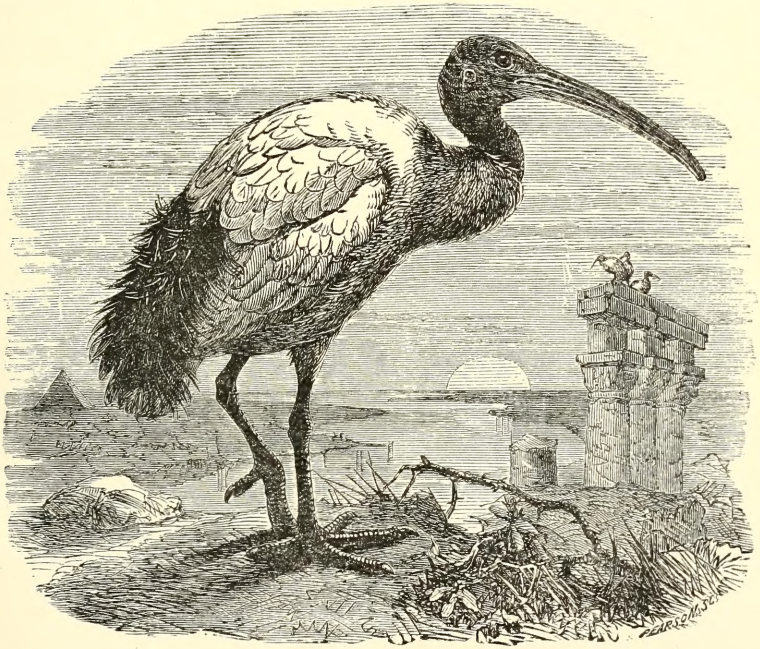
LIBRARY
OF
THE AMERICAN MUSEUM
OF
NATURAL HISTORY

AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK,
NEW YORK.

THE IBIS,

A
QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY TO THE ZOOLOGICAL SOCIETY OF LONDON,
AND
HOWARD SAUNDERS, F.L.S., F.Z.S.

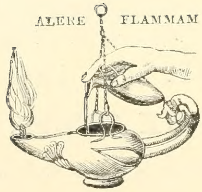


VOL. III. 1885.

FIFTH SERIES.

Ibis avis robusta et multos vivit in annos.

LONDON:
JOHN VAN VOORST, 1 PATERNOSTER ROW.
1885.


ALERE
FLAMMAM

PRINTED BY TAYLOR AND FRANCIS,
RED LION COURT, FLEET STREET.

PREFACE.

It will be evident that the Editors have had no lack of contributions to complain of during the past twelve months. In bulk, at least, the twenty-seventh volume of 'The Ibis' fairly equals the majority of its predecessors, and, it is believed, does not fall short of them as regards the interesting nature of its contents.

In other countries also there seems to be no abatement in the love of our favourite science; for, although one of our contemporaries has lately come to a sudden termination, a new and flourishing journal of ornithology was commenced last year, and the first part of another new organ of ornithological science has just made its appearance. Under such circumstances it is manifest that, notwithstanding the "universal depression" now so much spoken of, we have little to fear as regards the future progress of Ornithology.

P. L. S.

H. S.

London, October 1st, 1885.

BRITISH ORNITHOLOGISTS' UNION.

1885.

[An asterisk indicates an Original Member.]

Date of Election.

1881. William Randal, Earl of Antrim; St. James's Palace, London, S.W.

1885. James Backhouse, Jun.; West Bank, York.

1879. Valentine Ball, F.R.S.; Science and Art Museum, Dublin.

1872. Hanbury Barclay, Colonel, F.Z.S.; Cross Oak, Great Berkhampstead, Herts.

5 1885. Hugh G. Barclay, F.R.G.S.; Thorpe, Norwich.

1884. Henry E. Barnes, Capt.; Commissariat Department, India; care of Messrs. Ridgway & Sons, 2 Waterloo Place, London, S.W.

1881. Richard Manliffe Barrington, LL.B.; Fassaroe, Bray, co. Wicklow.

1884. Frank E. Beddard, Prosector to the Zoological Society; 9 Cleveland Terrace, Hyde Park, London, W.

1885. Capt. E. F. Becher, R.A., F.Z.S.; Hill House, Southwell, Notts.

10 1875. John Biddulph, Colonel, Bengal Staff Corps.

1880. Edward Bidwell; 1 Trig Lane, Upper Thames Street, London, E.C.

1884. C. T. Bingham, Capt.; Moulmein, Burmah.

1873. W. T. Blanford, F.R.S. &c.; 72 Bedford Gardens, Kensington, London, W.

1878. William Borrer, M.A., F.Z.S.; Cowfold, Horsham.

15 1885. William F. Brockholes; Claughton-on-Brock, Garstang, Lancashire.

1870. Sir Victor Brooke, Bart.; Colebrooke, Fermanagh, Ireland.

1866. Henry Buckley, F.Z.S.; 27 Wheeley's Road, Edgbaston, Birmingham.

Date of Election.

1868. Thomas Edward Buckley, B.A., F.Z.S.; Glenrossal, Invershin, Sutherlandshire, N.B.

1872. Walter Lawry Buller, C.M.G., Sc.D., F.R.S., F.L.S., &c.; Wellington, New Zealand.

20 1884. E. A. Butler, Lieut.-Col., 6 Tenterden Street, London, W.

1884. Geoffrey Fowell Buxton; Sunny Hill, Thorpe, Norwich.

1879. Thomas David Gibson Carmichael; Castlecraig, Dolphinton, N.B.; and St. John's College, Cambridge.

1884. Abel Chapman; Silksworth Hall, Sunderland.

1882. Robert William Chase; Southfield, Edgbaston Road, Birmingham.

25 1880. William Eagle Clarke, F.L.S.; 18 Claremont Road, Headingley, Leeds.

1876. Edward Henry Stuart, Lord Clifton, F.Z.S.; Dumpton Park, Ramsgate.

1880. E. H. Cooper, Lieut.-Col.; 42 Portman Square, London, W.

1874. John Cordeaux; Great Cotes, Ulceby, Lincolnshire.

1882. Charles B. Cory; 8 Arlington Street, Boston, Mass., U.S.A.

30 1882. Philip Crowley, F.Z.S.; Waddon House, Croydon.

1877. J. J. Dalgleish; 8 Atholl Crescent, Edinburgh.

1874. Charles Danford, F.Z.S.; Conservative Club, St. James', London, S.W.

1883. James Davidson; 32 Drumsheugh Gardens, Edinburgh.

1884. William Ruxton Davison; Ootacamund, South India.

35 1883. Scrope B. Doig; Public Works Department, Bombay.

1880. Arthur Dowsett; 54 Russell Street, Reading.

1865. Henry Eeles Dresser, F.L.S., F.Z.S.; 6 Tenterden Street, Hanover Square, London, W., and Topclyffe Grange, Farnborough, Kent.

*Henry Maurice Drummond-Hay, C.M.Z.S., Lieut.-Col., Royal Perth Rifles; Seggieden, Perth.

1878. W. Arthur Durnford; Tankersley, Barnsley.

40 1876. George Le C. Egerton, Lieut. R.N.; The Lodge, Stoke Road, Gosport.

1870. Daniel Giraud Elliot, F.R.S.E., &c.; New Brighton, Staten Island, New York, U.S.A.

1884. Algernon Elliott, Assist. Com., Yeotmahl, Berar, India.

1866. Henry John Elwes, F.Z.S.; Preston, Cirencester.

1879. Arthur Humble Evans, B.A.; Clare College, and 9 Harvey Road, Cambridge.

Date of Election.

45 1873. H. W. Feilden, Major, F.Z.S., C.M.Z.S.; West House, Wells, Norfolk.

1884. Henry Ogg Forbes, F.Z.S.; Rubislaw Den, Aberdeen.

1880. William Foster; The Hill, Witley, Surrey.

1865. Rev. Henry Elliott Fox, M.A.; 12 South Bailey, Durham.

1881. Percy Evans Freke; Rosemount, Dundrum, Co. Dublin.

50 1885. Sir Ralph Payne-Gallwey, Bart.; Thirkleby Park, Thirsk.

1881. Hans Gadow, Ph.D.; The New Museums, Cambridge.

1879. Ernest Gibson; 17 Mayfield Gardens, Edinburgh.

*Frederick DuCane Godman, F.R.S., &c.; 10 Chandos Street, Cavendish Square, London, W.

*Percy Sanden Godman, B.A., C.M.Z.S.; Muntham, Horsham.

55 1874. H. H. Godwin-Austen, Lieut.-Col., F.R.S., &c.; Junior United Service Club.

1884. J. G. Goodchild; 28 Jermyn Street, London, S.W.

1871. Robert Gray, F.R.S.E., F.S.A.S.; Bank of Scotland House, Bank Street, Edinburgh.

1878. Henry Grey, Bengal Staff Corps; care of Messrs. Grindlay & Co.

1885. F. H. H. Guillemard, M.D.; Eltham, Kent.

60 1876. Albert C. L. G. Günther, M.A., M.D., F.R.S., &c.; Keeper of the Zoological Department, British Museum of Natural History, London, S.W.

*John Henry Gurney, F.Z.S.; Northrepps Hall, Norwich.

1870. John Henry Gurney, Jun., F.Z.S.; Hill House, Northrepps, Norwich.

1877. Edward W. Harcourt, M.P.; Nuneham Park, Abingdon.

1883. Lewis Vernon Harcourt; 7 Grafton Street, London, W.

65 1876. H. C. Harford, 99th Regiment; 2 Eldon Villa, Granada Road, Southsea.

1877. E. Hargitt, F.Z.S.; 1 Bedford Road, Bedford Park, Chiswick.

1868. James Edmund Harting, F.L.S., F.Z.S.; 6 Oxford & Cambridge Mansions, London, N.W.

1873. John A. Harvie-Brown, F.Z.S.; Dunipace House, Larbert, N.B.

1868. Rev. Herbert S. Hawkins, M.A.; Beyton Rectory, Suffolk.

70 1875. J. C. Hele; Knowles, Newton-Abbot.

1884. C. J. Holdsworth; Wilmslow, Cheshire.

1877. E. W. H. Holdsworth, F.Z.S.; 84 Clifton Hill, St. John's Wood, London, N.W.

1881. Robert James Howard; Blackburn, Lancashire.

Date of Election.

*Wilfrid Hudleston Hudleston, M.A., F.Z.S.; Oatlands Park, Weybridge.

75 1879. Baron A. von Hügel; Cambridge.

1869. Allan Octavian Hume, C.B.; Simla, India.

1870. Hedworth Hylton, Lord Hylton; Merstham, Red Hill, Surrey.

1870. Leonard Howard L. Irby, Lieut.-Col., F.Z.S.; Army & Navy Club, Pall Mall, London, S.W.

1884. H. Heywood Jones, F.Z.S.; Larkhill, West Derby, Liverpool.

80 1880. Henry Robert Kelham, Capt. 74th Highlanders; Barracks, Hamilton, N.B.

1874. Alexander W. M. Clark Kennedy, Capt., F.L.S., F.Z.S.; Henbury, Wimborne, Dorset.

1882. Philip M. Kermode; Seabridge Cottage, Ramsay, Isle of Man.

*Arthur Edward Knox, M.A., F.L.S., F.Z.S., Dale Park, Arundel, Sussex.

1882. Rev. Edw. Ponsonby Knubley, M.A.; Stavely Rectory, Leeds.

85 1884. Herbert Langton; 115 Queen's Road, Brighton.

1881. Hon. Gerald Lascelles; Queen's House, Lyndhurst.

1885. George Lawson, C.B.; 36 Craven Hill Gardens, Hyde Park, London, W.

1876. Vincent Legge, Lieut.-Col., R.A.; Commandant's Office, Hobart Town, Tasmania.

1868. Hamon Le Strange, F.Z.S.; Hunstanton Hall, King's Lynn, Norfolk.

90 1875. Paget Walter Le Strange, Lieut.-Col. Royal Artillery; Secunderabad, Deccan, India.

*Thomas Lyttleton, Lord Lilford, F.L.S., F.Z.S., &c.; Lilford Hall, Oundle, and 6 Tenterden Street, London, W.

1874. John Hayes Lloyd, Major, F.Z.S.; Barn-rock House, Bognor, Sussex.

1877. J. Lumsden, Jun.; Arden House, Alexandria, N.B.

1875. John Wingfield Malcolm; 7 Stanhope Street, Mayfair, London, W.

95 1878. Henry Stacy Marks, R.A., F.Z.S.; 17 Hamilton Terrace, St. John's Wood, London, N.W.

1870. C. H. T. Marshall, Major, F.Z.S.; Superintendent, Chumba State, viâ Dalhousie, India.

1885. John Marshall, F.L.S.; Belmont, Taunton.

Date of Election.

1878. Rev. Murray A. Mathew, M.A., F.L.S.; Stone Hall, Wolf's Castle, Pembrokeshire.

1883. Edmund Gustavus Bloomfield Meade-Waldo; Rope Hill, Lymington, Hants.

100 1879. Frederick Shaw Mitchell; Clitheroe, Lancashire.

1864. Alexander Goodman More, F.L.S., &c.; Science and Art Museum, Dublin.

1885. Edward Neale; 6 Tenterden Street, London, W.

1882. Thomas Hudson Nelson; North Bondgate, Bishop Auckland, Durham.

1876. Hugh Nevill; Newton Villa, Godalming.

105 1872. Francis D'Arcy William Clough Newcome; Feltwell Hall, Brandon, Suffolk.

*Alfred Newton, M.A., F.R.S., F.Z.S.; Professor of Zoology in the University of Cambridge.

*Edward Newton, M.A., C.M.G., F.L.S., C.M.Z.S.

1876. Francis Nicholson, F.Z.S.; The Grove, Oldfield, Altrincham.

1882. Eugene William Oates; 6 Tenterden Street, Hanover Square, London, W.

110 *Sir John W. P. Campbell-Orde, Bart., F.Z.S., late Captain, 42nd (Royal Highland) Regiment; Kilmory House, Loch Gilp Head, Argyllshire, N.B.

1883. Henry Parker, C.E.; Public Works Department, Ceylon.

1880. Thomas Parkin, M.A., F.Z.S.; Halton, near Hastings.

1884. R. L. Patterson, F.L.S.; Croft House, Holywood, co. Down.

1883. Thomas Mayer Pike, M.A.; Westport, Wareham.

115 1880. Charles Matthew Prior; The Avenue, Bedford, and Trinity Hall, Cambridge.

1872. R. G. Wardlaw Ramsay, Major, F.Z.S.; Whitehill, Rosewell, N.B.

1879. Herbert Evelyn Rawson, F.Z.S.; Coney Hall Farm, West Wickham, Beckenham, Kent.

1877. Savile G. Reid, Capt. R.E.; Ashridgewood, Wokingham.

1873. Sir Oliver Beauchamp Coventry St. John, Colonel R.E.; care of Messrs. H. S. King & Co., 45 Pall Mall, London, S.W.

120 1883. William Herbert St. Quintin; Scampston Hall, Rillington, Yorkshire.

*Osbert Salvin, M.A., F.R.S., &c.; 10 Chandos Street, London, W., and Hawksfold, Fernhurst, Haslemere.

Date of Election.

1870. Howard Saunders, F.L.S., F.Z.S., &c.; 7 Radnor Place, Hyde Park, London, W.

*Philip Lutley Sclater, M.A., Ph.D., F.R.S., &c.; 44 Elvaston Place, Queen's Gate, London, S.W.

1881. J. Scully, F.L.S., F.Z.S.; care of Messrs. H. S. King & Co., 45 Pall Mall, London, S.W.

125 1873. Henry Seebohm, F.Z.S.; 6 Tenterden Street, Hanover Square, W., and 22 Courtfield Gardens, London, S.W.

1871. Richard Bowdler Sharpe, F.L.S., F.Z.S.; Senior Assistant, Zoological Department, British Museum of Natural History, London, S.W.

1870. G. Ernest Shelley, F.Z.S., late Captain, Grenadier Guards; 6 Tenterden Street, Hanover Square, London, W.

1865. Rev. Charles William Shepherd, M.A., F.Z.S.; Trotterscliffe Rectory, Maidstone, Kent.

1881. F. B. Simson; Broom Hill, Spratton, Northampton.

130 1882. Rev. Henry H. Slater, M.A., F.Z.S.; Irchester Vicarage, Wellingboro', Northampton.

1878. George Monlaw Slaughter, Brigade-Surgeon; Farningham, Kent.

1864. Rev. Alfred Charles Smith, M.A.; Yatesbury Rectory, Calne, Wiltshire.

1874. Cecil Smith, F.Z.S.; Lydeard House, Taunton, Somersetshire.

1881. Thomas Southwell, F.Z.S.; 10 The Crescent, Chapel Field, Norwich.

135 1875. A. C. Stark; 1 Merchiston Avenue, Edinburgh.

1864. Henry Stevenson, F.L.S.; 22 Unthank's Road, Norwich.

1881. Robert Wright Studdy, Major 63rd Regiment, India; care of E. W. H. Holdsworth, 84 Clifton Hill, St. John's Wood, London, N.W.

1882. Charles Swinhoe, Lieut.-Col., Bombay Staff Corps, Commissariat Department, Poona, Bombay.

1884. W. C. Tait; Oporto.

140 *Edward Cavendish Taylor, M.A., F.Z.S.; 74 Jermyn Street, London, S.W.

1864. George Cavendish Taylor, F.Z.S.; 42 Elvaston Place, Queen's Gate, London, S.W.

1873. William Bernhard Tegetmeier, F.Z.S.; Finchley, Middlesex.

*Rev. Henry Baker Tristram, M.A., LL.D., F.R.S., &c., Canon of Durham; The College, Durham.

Date of Election.

1864. Henry Morris Upcher, F.Z.S.; Sheringham Hall, Norfolk, and Feltwell Hall, Brandon.

145 1881. Willoughby Verner, Capt. Royal Rifle Brigade; 13 Bryanston Square, W.

1884. A. S. Vesey; 3 Campden Villas, Barnes, S.W.

1881. Thomas, Lord Walsingham, F.Z.S.; Eaton House, Eaton Square, London, S.W., and Merton Hall, Thetford, Norfolk.

1874. Charles Bygrave Wharton, F.Z.S.; Hounsdown, Totton, Hants.

1878. Henry Thornton Wharton, M.A., F.Z.S.; 39 St. George's Road, Abbey Road, London, N.W.

150 1884. Joseph Whitaker, F.Z.S.; Rainworth Lodge, Mansfield, Notts.

1871. E. Perceval Wright, M.D., F.L.S., F.Z.S., Professor of Botany in the University of Dublin.

1875. Charles A. Wright, F.Z.S.; Kayhough House, Kew-Gardens, Kew.

1876. Claude W. Wyatt; Adderbury, Banbury.

1878. John Young, F.Z.S.; 64 Hereford Road, Westbourne Grove, London, W.

155 1877. J. H. Yule, Capt., Devon Regiment; Jullundur, Bengal.

Extra-Ordinary Member.

1860. Alfred Russel Wallace, F.Z.S.; Nutwood Cottage, Frith Hill, Godalming.

Honorary Members.

1860. Professor Spencer Fullerton Baird, Secretary to the Smithsonian Institution, *Washington, D.C.*

1860. Doctor Eduard Baldamus, Moritzwinger, No. 7, *Halle.*

1860. Doctor Jean Cabanis, Erster Custos am königlichen Museum der Friedrich-Wilhelm's Universität zu *Berlin.*

1870. Doctor Otto Finsch. *Bremen.*

5 1880. Heinrich Gätke, C.M.Z.S., Secretary to the Government of *Heligoland.*

1860. Doctor Gustav Hartlaub, *Bremen.*

1860. Edgar Leopold Layard, C.M.G., F.Z.S., H.B.M. Consul, *New Caledonia.*

1869. August von Pelzeln, Custos am k.-k. zoologischen Cabinete in *Wien.*

Date of Election.

Foreign Members.

1872. Prof. J. V. Barboza du Bocage, Royal Museum, *Lisbon.*
1875. Hans, Graf von Berlepsch, *Münden, Hannover.*
1880. Louis Bureau, M.D., Ecole de médecine, *Nantes.*
1873. Robert Collett, Zoological Museum, *Christiania.*
5 1872. Doctor Elliott Coues, Smithsonian Institution, *Washington, D.C.*
1875. Marchese Giacomo Doria, *Genoa.*
1872. Doctor Victor Fatio, *Geneva.*
1872. Doctor Henry Hillyer Giglioli, Royal Institute of Superior Studies, *Florence.*
1872. George N. Lawrence, *New York.*
10 1872. Baron De Selys Longchamps, *Liège.*
1872. Doctor A. J. Malmgren, *Helsingfors.*
1883. Prof. Othniel Charles Marsh, Yale College, *Newhaven, U.S.A.*
1881. Doctor Adolph Bernard Meyer, Director of the Royal Museum, *Dresden.*
1872. Doctor A. von Middendorff, *Dorpat.*
15 1872. Prof. Alphonse Milne-Edwards, Jardin des Plantes, *Paris.*
1881. Colonel N. Prejevalsky, Academy of Science and Art, *St. Petersburg.*
1872. Prof. Gustav Radde, *Tiflis.*
1880. Robert Ridgway, C.M.Z.S., Smithsonian Institution, *Washington, D.C.*
1872. Count Tommaso Salvadori, Zoological Museum, *Turin.*

CONTENTS OF VOL. III.—FIFTH SERIES.

(1885.)

Number IX., *January*.

Page

I. Notes on Woodpeckers.—No. IX. On the Genus *Micropternus*. By Edward Hargitt, F.Z.S. 1

II. On the Muscicapine Genus *Chasiempis*. By P. L. Sclater, M.A., Ph.D., F.R.S. (Plate I.) 17

III. On the Aftershaft in the Feathers of certain Birds. By F. E. Beddard, M.A., F.Z.S., Prosector to the Zoological Society of London 19

IV. Ornithological Notes from Corsica. By John Whitehead. (Plate II.) 24

V. On two Birds from Norfolk Island. By H. B. Tristram, D.D., F.R.S. 48

VI. On the Shedding of the Claws in the Ptarmigan and allied Birds. By Leonhard Stejneger 50

VII. On the Birds of Central India.—Part I. By Lieut.-Col. C. Swinhoe and Lieut. Henry Barnes 52

VIII. The Ornithology of St. Kilda. By Charles Dixon. (Plate III.) 69

IX. Notices of recent Ornithological Publications:—

1. Baird, Brewer, and Ridgway on the Water-Birds of North America 97

Page
2. Barboza du Bocage on Birds from Angola 98
3. Barboza du Bocage on West-African Birds 98
4. Barboza du Bocage on *Cinnyris erikssoni* 98
5. Belding on the Birds of Guaymas 98
6. Belding on the Birds of Lower California 98
7. Buller on rare New-Zealand Birds 99
8. Cory on the Birds of San Domingo 99
9. Coues's new Key to North-American Birds 100
10. Cowan on the Birds of Madagascar 101
11. De Verteuil's 'Trinidad.' (Second edition.) . . . 102
12. De Vis on the Moa in Australia 103
13. Dresser's Monograph of the Bee-eaters 103
14. Dubois on a new Parrot from New Guinea 104
15. Filhol on the Osteology of the Penguins 104
16. Filhol on the Diaphragm of the Penguins 104
17. Filhol on the Arterial System of the Penguins . . 104
18. Gurney on the Arctic Blue-throated Warbler in Norfolk 105
19. Gurney on the "Hairy" variety of the Moorhen . . 105
20. Haast on the Grey Phalarope in New Zealand . . . 106
21. Homeyer and Tancré on the Birds of the Altai . . 106
22. Jouy on the Birds of Japan 106
23. Lawrence on a new *Hemiprocne* 107
24. Lydekker on Siwalik Fossil Birds 107
25. Milne-Edwards on the Fauna of the Antarctic Regions 108
26. Murray's 'Vertebrate Zoology of Sind' 109
27. Nutting on Birds from Nicaragua 109
28. Przewalski's Journey in Tibet 110
29. Radde's 'Ornis Caucasica' 111
30. Reichenow on Parrots 112
31. Ridgway on new Birds from the Commander Islands and Petropaulovski 112
32. Ridgway on new Costa-Rican Birds 113
33. Ridgway on West-Indian Birds 113
34. Ridgway on a new Field-Sparrow 114
35. Robson on the Breeding of the Eastern Golden Plover 114
36. Schalow on a new Plaintain-eater 114
37. Sharpe on the Birds of the Voyage of the 'Alert' . 114
38. Sharpe on various Timeliidæ 115
39. Sharpe on a new Wren from Timor 115
40. Sharpe on Birds from New Guinea 115

Page
41. Sharpe on Birds from Equatorial Africa 115
42. Shufeldt on the forms of the Patella in Birds . . . 116
43. Smith on the *Hieracideæ* 116
44. Souza on *Bucorax pyrrhops* 116
45. Stejneger on the Natural History of the Commander Islands 116
46. Stejneger on the Genus *Cepphus* 117
47. Travers on the Organic Productions of New Zealand . 117

X. Letters, Extracts, Announcements, &c.:—

Letters from Mr. L. M. Turner and Messrs. Salvin and Godman; Singular Development of *Opisthocomus*; The National Bird-Collection at Washington; Ornithological Works in Progress; Proceedings of the Ridgway Ornithological Club . . 117

NUMBER X., *April.*

XI. On two new Birds from Borneo. By the Rev. H. H. SLATER, B.A. (Plate IV.) 121

XII. On the Birds of Central India.—Part II. By Lieut.-Col. C. SWINHOE and Lieut. HENRY BARNES 124

XIII. Notes on some Eastern Owls. By J. H. GURNEY . 138

XIV. Notes on Woodpeckers.—No. X. On the Genus *Thriponax*. By EDWARD HARGITT, F.Z.S. 140

XV. A Birds'-Nesting Ramble in Lapland. By ALFRED CRAWHALL CHAPMAN 158

XVI. On a Collection of Birds from the Island of Cozumel. By OSBERT SALVIN, M.A., F.R.S., &c. (Plate V.) 185

XVII. On a small Collection of Birds from Korea. By H. B. TRISTRAM, D.D., F.R.S. 194

XVIII. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By OSBERT SALVIN, M.A., F.R.S., &c. (Part I.) 195

Page

XIX. Notices of recent Ornithological Publications:—

48. 'The Auk' 220
49. Baird, Brewer, and Ridgway on the Water-Birds of North America 221
50. Berlepsch on the Birds of Bucaramanga 221
51. Bidwell on Sabine's Gull 222
52. W. Blasius on a new Trumpeter 222
53. W. Blasius on Grabowsky's latest Bornean Collections 222
54. W. Blasius on the Breast-bones of Birds 223
55. W. Blasius's third Paper on the Great Auk . . . 223
56. Bogdanow on Russian Ornithology 223
57. British Association's Report on Migration in 1883 . 224
58. Buckley and Harvie-Brown on the Birds of Sutherlandshire 224
59. Collett on the Great Auk in Norway 225
60. Cory on the Birds of San Domingo 225
61. Dresser's Monograph of the Bee-eaters 225
62. Fischer on the Birds of Masai-land 226
63. Glanville's Catalogue of the Albany Museum, Cape Colony 226
64. Godman and Salvin's 'Biologia Centrali-Americana' . 227
65. Gould's 'Birds of New Guinea' 227
66. Gurney on the Birds of Norfolk 228
67. Hawtayne's Taxidermic Notes 228
68. Henke on the Ostrich-question 229
69. Homeyer on a new Stonechat 229
70. Huet on Additions to the Jardin des Plantes . . . 229
71. Le Moine on Canadian Ornithology 229
72. Meyer on Birds' Nests and Eggs from the East Indies 230
73. 'The Naturalist' 230
74. Olphe-Galliard on the Ornithology of Western Europe 231
75–78. Ridgway on American Birds 231
79. Salvadori on the Birds of Shoa 232
80. Saunders's Edition of 'Yarrell's British Birds' . . . 232
81. Smithsonian Report for 1882 233
82. Stejneger on Trinomials in Ornithology 233
83. Taczanowski's 'Ornithology of Peru' 234
84. Vila on the Ornithology of Gerona 234

Page

XX. Letters, Announcements, &c.:—

Letter from M. Léon Olphe-Galliard; Gift of the Salvin-Godman Collection to the British Museum; The Hume Collection of Indian Birds; Ridgway Ornithological Club, Chicago; News from the Caucasus; Black Redstart in Somersetshire; Obituary—Dr. Rüppell, Prof. Severtzoff, Mr. E. W. White, and Mr. E. C. Rye; Mr. J. A. Allen; New Edition of Buller's 'Birds of New Zealand' 235

Number XI., *July*.

XXI. Winter Notes from Morocco. By Capt. S. G. Reid . 241

XXII. On the Geographical Distribution of Birds in European Russia north of the Caucasus.—Part II. Rapaces Nocturnæ. By M. Menzbier 255

XXIII. Notes on the Breeding-habits of certain Sea-Birds frequenting Norfolk Island and the adjoining Islets. By W. M. Crowfoot, M.D. 263

XXIV. On the Cormorants of Japan and China. By Henry Seebohm 270

XXV. On some little-known Species of Tanagers. By P. L. Sclater, M.A., Ph.D., F.R.S. (Plate VI.) 271

XXVI. Notes on the Birds of Paisandú, Republic of Uruguay. By Ernest Gibson, F.Z.S. (Communicated by J. J. Dalgleish.) 275

XXVII. Notes on the Birds of the Genus *Homorus* observed in the Argentine Republic. By W. H. Hudson, C.M.Z.S. . . 283

XXVIII. On the Coloration in Life of the naked Skin-tracts on the Head of *Geococcyx californianus*. By Dr. R. W. Shufeldt, U.S. Army, Memb. of the Am. Ornith. Union, &c. (Plate VII.) 286

XXIX. Descriptions of three new Species of Birds from South America. By Hans von Berlepsch 288

Page
XXX. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By Osbert Salvin, M.A., F.R.S., &c. (Continued.) (Plate VIII.) 291

XXXI. Review of the Species of the Family Coliidæ. By Capt. G. E. Shelley, F.Z.S. 307

XXXII. Notices of recent Ornithological Publications:—

85. Cory's 'Birds of San Domingo' 314
86. Dresser's Monograph of the Bee-eaters 314
87. Dubois on the Genus *Otocorys* 315
88. Dubois on the Hornbills 315
89. Garman on Polynomials in Zoology 315
90. Gould's 'Birds of New Guinea' 316
91. Gould's 'Supplement to the *Trochilidæ*' 316
92. Langille on North-American Birds 317
93. Lawrence on new Species of *Tyrannidæ*, *Cypselidæ*, and *Columbidæ* 317
94. Menzbier on the Blue Tits 317
95. 'Mittheilungen' of the Ornithological Union of Vienna 318
96. Newton on Ornithology 318
97. Pagenstecher's 'Birds of South Georgia' 319
98. Protocol of the International Ornithologists' Congress 320
99. Report of the Harvard Museum of Zoology 320
100. Ridgway on new Birds from Cozumel Island . . . 321
101. Rochebrune's 'Birds of Senegambia' 322
102. Saunders's Edition of 'Yarrell's British Birds' . . 323
103. Sharpe on the Fringilliformes 323
104. Shufeldt on the Osteology of *Ceryle alcyon* 325
105. Shufeldt on the Osteology of *Numenius longirostris* . 325
106. Traquair on Biological Nomenclature . . . . . . , 325
107. Tschusi zu Schmidhoffen on the Long-tailed Tits of Europe 326
108. Tschusi zu Schmidhoffen on the Summer Duck in Styria 326
109. Vorderman on the Birds of Batavia 326
110. Vorderman's 'List of Javan Birds' 326
111. 'The Young Oologist' 327

Page

XXXIII. Letters, Announcements, &c.:—

Letters from the Rev. H. H. Slater and Mr. Osbert Salvin; Anniversary of the British Ornithologists' Union; New Ornithological Work; Prjevalsky's New Expedition; The Ridgway Ornithological Club, Chicago, U.S.A.; Birds breeding in Ants' Nests; Birds at Scotch Lighthouses; Mr. R. B. Sharpe's Departure for Simla; Obituary—Mr. Ernest William White, Dr. Eduard Rüppell, and Richard Boehm; News of Dr. Finsch; New Expeditions; New Work on the Swallows 327

NUMBER XII., *October*.

XXXIV. Additional Notes on the Ornithology of Transvaal. By THOMAS AYRES. Communicated by JOHN HENRY GURNEY . 341

XXXV. On the Birds of the Upper Tarim, Kashgaria. By M. MENZBIER 352

XXXVI. Further Notes on the Ornithology of St. Kilda. By CHARLES DIXON 358

XXXVII. Note on *Baza ceylonensis*, Legge. By SAMUEL BLIGH. Communicated by J. H. GURNEY 362

XXXVIII. Further Contributions to the Ornithology of Japan. By HENRY SEEBOHM 363

XXXIX. An Autumn Ramble in Eastern Iceland, with some Notes from the Faröes. By WM. EAGLE CLARKE, F.L.S., and JAMES BACKHOUSE, Jun. (Plate IX.) 364

XL. Stray Ornithological Notes. By W. EDWIN BROOKS . 380

XLI. On Mr. E. Lort Phillips's Collection of Birds from Somali-land. By Capt. G. E. SHELLEY, F.Z.S. (Plates X.–XII.) 389

XLII. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By OSBERT SALVIN, M.A., F.R.S., &c. (Continued.) 418

Page

XLIII. Notices of recent Ornithological Publications:—

112. 'The Auk' 440
113. Blomefield's 'Reminiscences of Yarrell' 441
114. British Association's Report on Migration in 1884 . 441
115. Buckley on the Birds of Rousay, Orkney Islands . 442
116. Bunge on Birds of the Delta of the Lena 443
117. Cory's 'List of the Birds of the West Indies' . . 443
118. Dubois on Belgian Birds 443
119. Dybowski and Taczanowski on the Birds of Kamtschatka 444
120. H. O. Forbes on the Eastern Archipelago 444
121. Harvie-Brown on Kumlien's Gull 445
122. Meyer on new Birds in the Dresden Museum . . . 445
123. Mitchell's 'Birds of Lancashire' 446
124. More on Irish Birds 446
125. Nehrkorn on Birds from Waigiou 447
126. 'Ornithologist and Oologist' 447
127. Reid on the Birds of Bermuda 447
128–142. Ridgway on American Birds 448
143. Salvadori and Giglioli on new Birds from Cochin China 450
144. Schalow on the Birds of Mark Brandenburg . . . 451
145. Schiavuzzi on Northern Birds in the Adriatic . . . 451
146. Stejneger on *Lanius robustus* 451
147. Stejneger on a new Sparrow 452
148. Taczanowski on Abnormal Moults 452
149. Tait on Portuguese Birds 452
150. Zeledon on the Birds of Costa Rica 452

XLIV. Letters, Announcements, &c.:—

Letter from Mr. H. E. Dresser; Additions to the Bird-collection of the British Museum in 1884; the Hume Collection of Indian Birds; The Development of the Avian Sternum; More News of Dr. O. Finsch; Habits of Raggi's Paradise-bird; Recent Appointments in the United States 453

Index 465
Titlepage, Preface, List of Members, and Contents.

PLATES IN VOL. III.

FIFTH SERIES.

Page
I. Chasiempis sandwichensis 18
II. Sitta whiteheadi 28
III. Troglodytes hirtensis 80
IV. Parus cinerascens 122
V. Spindalis exsul 189
VI. Fig. 1. Tachyphonus nattereri 273
VI. Fig. 2. Lanio lawrencii 272
VII. Geococcyx californianus 286
VIII. Pachyrhamphus griseigularis 302
IX. Lagopus rupestris 378
X. Fig. 1. Dryoscopus ruficeps 402
X. Fig. 2. Telephonus jamesi 403
XI. Fig. 1. Argya aylmeri 404
XI. Fig. 2. Parus thruppi 406
XII. Saxicola phillipsi 404

THE IBIS.

FIFTH SERIES

No. IX. JANUARY 1885.

I.—*Notes on Woodpeckers.*—No. IX. *On the Genus* Micropternus. By Edward Hargitt, F.Z.S.

After Mr. Hume's admirable paper on the genus *Micropternus* ('Stray Feathers,' 1877, p. 472), it would perhaps appear unnecessary on my part to take up the same subject, and my notes must not be viewed as a critique, but as a supplement to Mr. Hume's work. As regards the Indian and Indo-Malayan species, I entirely agree with him; but my views concerning the Chinese species, *M. fokiensis* and *M. holroydi,* are not in harmony with his. This may perhaps be accounted for by my having had the opportunity of carefully examining the Swinhoe collection (now in the possession of Mr. Seebohm), which contains the types, and by my having seen the specimens in the British Museum; while Mr. Hume, on his part, frankly tells us that he has only examined one specimen of *M. fokiensis,* and that he has never seen *M. holroydi* at all. In my opinion, *M. fokiensis* is as clearly distinct from *M. brachyurus* as the latter species is from *M. phæoceps*; and the Hainan bird, *M. holroydi,* may be readily distinguished from *M. fokiensis,* the Foochow species. I acknowledge my obligations to Mr. Hume for the valuable assistance I have derived from his labours. His thorough knowledge of the Indian species, aided by an extensive series of specimens, has enabled him to enlighten us on the many difficult points to be found in a genus where the members are so closely allied, and where the individuals of each species vary so much in size and markings according to locality and age.

Key to the Species.

- *a*. Top of the head uniform.
  - a^1. Feathers of the chin and throat uniform with the underparts, but with paler margins; striated in character.
    - a^2. Tail rufous, narrowly barred with black; the red on the face confined to a patch under the eye. . *phæoceps*, p. 3.
    - b^2. Tail barred rufous and black at the base, the apical half black; the eye entirely surrounded with red . . . . *badiosus*, p. 6.
  - b^1. Feathers of the chin and throat darker than the underparts, the apical portion only margined with whitish, scaly in character; tail rufous, narrowly barred with black . . . . *gularis*, p. 7.
- *b*. Top of the head striated.
  - c^1. Above rufous, barred with black; underparts rufous; feathers of the chin and throat darker than the underparts, but with paler margins, scaly in character; tail barred equally rufous and black . . . . *brachyurus*, [p. 10.
  - d^1. Above dark brown, narrowly barred with rufous, the barring more or less indistinct; underparts dark brown.
    - c^2. Head and neck very much lighter than the body; striations on the chin and throat strongly marked and darker than the underparts; back and rump entirely barred with dull rufous: size large—length 8·3 inches, culmen 1·1, wing 5·0, tail 2·8, tarsus 0·85 . . . . *fokiensis*, [p. 12.
    - d^2. Head and neck brown, and only slightly lighter than the body; feathers of the chin and throat unicolorous with the underparts, but with paler margins; rufous barring on the back and rump almost obsolete: size small—length 7·5 inches, culmen 1·0, wing 4·5, tail 2·4, tarsus 0·85 . . . . *holroydi*, p. 15.

1. Micropternus phæoceps.

Picus rufus (non Gmel.), Gray, Hardw. Ill. Ind. Zool. pl. xxix. fig. 2 (1821–22).

Meiglyptes badius (non Raffl.), Hodgs. in Gray's Zool. Misc. 1844, p. 85.

Micropternus phaioceps, Blyth, J. A. S. B. xiv. pp. 195, 551 (1845); id. Cat. B. Mus. As. Soc. p. 60 (1849); Bp. Consp. Volucr. Zygod. p. 9 (1854); Reichenb. Handb. Scans. Picinæ, p. 403. no. 939, pl. dclvii. fig. 4373, ♀, pl. dclviii. fig. 4377, ♀ (1854); Horsf. & Moore, Cat. B. E.I. Co. Mus. ii. p. 667 (1856–58); Jerd. B. Ind. i. p. 294 (1862); id. Ibis, 1872, p. 10; Godwin-Austen, J. A. S. B. xliii. p. 176 (1874); Ball, Str. F. 1874, p. 392; Hume, t. c. p. 472; id. & Oates, op. cit. 1875, p. 72; Blyth & Wald. B. Burm. p. 77 (1875); Gammie, Str. F. 1876, p. 511; Hume, op. cit. 1877, p. 480; id. op. cit. 1878, vi. pp. 145, 501; Ball, op. cit. 1878, vii. p. 206; Cripps, t. c. p. 262; Scully, op. cit. 1879, pp. 249, 365; Salvin, Cat. Strickl. Coll. p. 402 (1882).

Meiglyptes brachyurus (non Vieill.), Gray, Cat. Mamm. &c. Nepal pres. Hodgs. p. 117 (1846).

Phaiopicos blythii, Malh. Rev. et Mag. Zool. 1849, p. 534.

Meiglyptes phaioceps, Gray, Gen. B. iii. App. p. 22 (1849); id. List Picid. Brit. Mus. p. 124 (1868); id. Hand-l. B. ii. p. 203. no. 8840 (1870).

Meiglyptes rufinotus, Bp. Consp. Gen. Av. i. p. 113 (1850).

Phaiopicus rufinotus, Malh. Monogr. Picid. ii. p. 1, pl. xlvi. figs. 1, 2 (1862).

Micropternus phæoceps, Beavan, Ibis, 1865, p. 411; Bulger, op. cit. 1869, p. 157; Hume, Str. F. 1879, p. 88; id. op. cit. 1880, p. 112; Bingham, t. c. p. 164; Oates, op. cit. 1882, x. p. 192; id. B. Brit. Burm. ii. p. 57 (1883).

Picus rufinotus, Sundev. Consp. Av. Picin. p. 88 (1866); Giebel, Thes. Orn. p. 178 (1876).

Micropternus burmanicus, Hume, P. A. S. B. 1872, pp. 70–71.

Adult male. Entirely rufous, the top of the head dusky brown; the whole of the back, as well as the wings and tail and their coverts, barred with black, the barring on the back, tail-coverts, and tail narrow, that on the tail-feathers about one third the width of the intervening rufous space; tips of central rectrices and outer primaries black; shafts of quills clear orange-brown, those of the tail-feathers darker and more of a dusky brown; nasal plumes, forehead, crown, and occiput uniform dusky brown; the nape and hind neck rich rufous; occipital and nuchal feathers elongated; the feathers of the cheeks, chin, and throat of the same colour as the underparts, and margined on both webs with a paler and clearer shade, inclining to ochreous; under the eye a red spot or patch; sides of the neck and under surface of the body uniform, the sides of the neck, chest, and breast being of a rich rufous, the abdomen slightly dusky, and the flanks and thighs barred with black; under tail-coverts with almost obsolete black barring; under wing-coverts and axillaries rufous, with a few blackish bar-like spots. Total length 8·5 inches, culmen 1·18, wing 4·9, tail 2·5, tarsus 0·9; toes (without claws)—outer anterior 0·72, outer posterior 0·68, inner anterior 0·5, inner posterior 0·28.

Adult female. Resembling the adult male, but wanting the red spot under the eye. Total length 8·0 inches, culmen 1·07, wing 4·75, tail 2·6, tarsus 0·85.

Mr. Oates gives the soft parts in this species as follows:—"Irides brown; eyelids plumbeous; bill dark brown, nearly black, plumbeous at base of lower mandible; inside of mouth rosy fleshy; legs and feet greyish brown; claws horn-colour."

I have in my collection a specimen from Kaukaryit (*Darling*), which has the chin and throat intermediate between *M. phæoceps* and *M. brachyurus*: the feathers have a very dark-brown central stripe, the light margins being broader than in *M. brachyurus*; the tail is the same as in typical *M. phæoceps*.

The present species is perhaps the best known of the genus. It is found in North-east and Central India, Cachar, Assam, and southwards extends as far as Tavoy in Tenasserim, where it is replaced by *M. brachyurus*. It also ranges into Siam, whence there is an example in the Leiden Museum (*Ver-*

reaux). In the British Museum are specimens from Cochin China (*Pierre*), apparently referable to the present species. According to Jerdon *M. phæoceps* is found in Kumaon, Nepal, Sikkim, Lower Bengal, and in some of the forests of Central India; he procured it in the Bustar jungle, south-east of Nagpore. Dr. Scully says the Rufous Woodpecker seems to be rather rare in the valley of Nepal. Capt. Bulger obtained it on the Rungmo river, in Sikkim, in which province Jerdon states it is not common and keeps to the warm valleys, from 1500 to 3000 feet elevation. Mr. Gammie observed it at Monghoo, where it was found breeding in ants' nests. Mr. Cripps records it from Furreedpore, in Eastern Bengal. In the Rajmehal Hills it has been procured by Mr. Ball, who observes that it extends thence to the Godaveri valley, being found in the hilly region. Capt. Beavan saw it at Maunbhoom. In my cabinet are examples collected by Mr. Inglis in Cachar; these specimens are small; Assam examples, on the contrary, are large. Blyth gives Tipperah and Arracan as habitats of this species. Mr. Eugene Oates says it is "very common on the eastern slopes of the Pegu Hills from the frontier right down to Rangoon, round which town it is specially abundant." Mr. Hume's collection contains examples from Tenasserim as follows:—Pahpoon, Beeling, Thatone, Wimpong, Myawadee, Ko-go-Houngthraw, Kaukaryit, Houngthraw river, Moulmein, Karope, Amherst, Meeta Myo, and Tavoy. In the Appendix to the "Birds of Tenasserim" ('Stray Feathers,' vi. p. 501: 1878), Mr. Hume says, "We procured a large additional series of this species around the base of Nwalabo and in the country between this and Tavoy. All of them are, on the whole, more properly referable to this species, though two or three of them make a decided approach to *brachyurus*." According to Capt. Bingham it is a fairly common bird in the Thoungyeen jungles. Mr. Hume (Str. F. 1880, p. 112) gives an isolated instance of its occurrence at Klang, Salangore, in the Malay peninsula, and states that the example is a typical specimen of *M. phæoceps*, also that he has procured a large series of *Micropterni* north and south of that place, as well as in the same locality, and that, with this exception, they have all been true *M. brachyurus*.

2. MICROPTERNUS BADIOSUS.

Meiglyptes badiosus, Temm. Mus. Lugd.; Bp. Consp. Gen. Av. i. p. 113 (1850); Gray, List Picid. Brit. Mus. p. 126 (1868); id. Hand-l. B. ii. p. 203. no. 8646 (1870).

Micropternus badiosus, Bp. Consp. Volucr. Zygod. p. 9 (1854); Reichenb. Handb. Scans. Picinæ, p. 404. no. 942 (1854); Salvad. Ucc. Born. p. 58 (1874); Sharpe, P. Z. S. 1875, p. 103; Hume, Str. F. 1877, pp. 480, 481; Sharpe, Ibis, 1879, p. 243; id. P. Z. S. 1881, p. 792; id. Ibis, 1883, p. 89.

Phaiopicus badiosus, Malh. Monogr. Picid. ii. p. 6 (1882).

Picus badiosus, Sundev. Consp. Av. Picin. p. 91 (1866); Giebel, Thes. Orn. p. 143 (1876).

Adult male. Entire plumage rich rufous, slightly dusky on the forehead and crown; back, scapularies, and wing-coverts uniform, the concealed portion of some of the feathers having blackish barring; bastard wing and primary-coverts barred with black on the inner webs; quills barred with black upon both webs, the barring on the inner webs broader, the bar-like spots on the outer webs of some of the inner primaries almost obsolete, tips of primaries black; shafts of quills brown; rump-feathers black at the base, the apical portion having an intermarginal V-shaped black marking; upper tail-coverts with a similar marking on the apical portion, and barred with black at the base; tail-feathers barred with black on the basal half, the width of the black and rufous barring being equal; apical half black; dwarf feather barred with black along its whole length; shafts black; nasal plumes, forehead, and crown slightly dusky; occipital feathers elongated; the feathers surrounding the eye tipped with crimson; cheeks, chin, and throat like the underparts, the feathers margined with buffy whitish; sides of the face and neck, fore neck, and under surface of the body uniform, the flanks and under tail-coverts with almost obsolete blackish barring; under wing-coverts and axillaries uniform rufous: "iris dull red" (*Doria*). Total length 7·5 inches, culmen 1·03, wing 4·25, tail 2·15, tarsus 0·83; toes (without claws)—outer anterior 0·63, outer posterior 0·57, inner anterior 0·55, inner posterior 0·15.

Another male (apparently fully adult) from Sandakan (*Pryer*), with the feathers entirely surrounding the eye tipped with crimson, has the back and wing-coverts more barred with black, the tail being black, with indistinct rufous barring at the base. It appears therefore that birds fully adult may or may not have the back clearly banded with black. In *M. phæoceps* are often found fully adult specimens having the back nearly uniform; but the character of the majority of individuals of each species comprised in the present genus (except *M. badiosus*, judging from the examples which I have examined) is to have the back banded. I think that the immature and adult stages of plumage in *Micropterni*, as in many other genera of Woodpeckers, are more clearly indicated by coloration than by markings. In the species at present under notice the large amount and brilliancy of the red surrounding the eye, and the bright yellow spot on the lower mandible, show the adult stage.

Adult female. Resembling the adult male, but wanting the red patch on the side of the face. Total length 7·2 inches, culmen 1·05, wing 4·23, tail 2·25, tarsus 0·83.

This species is confined to the island of Borneo. Mr. Pryer met with it in Sandakan, and it has been obtained at Lumbidan by Governor Ussher and Mr. Treacher, the former gentleman having also procured it at Brunei. Mr. Treacher found it on the Lawas river. Mr. Wallace, as well as Marquis Doria and Dr. Beccari, obtained this species in Sarawak, and Messrs. Mottley and Schierbrand procured specimens at Banjermassing.

3. MICROPTERNUS GULARIS.

Micropternus gularis, Jerd. Madr. Journ. xiii. p. 139 (1844); Blyth, J. A. S. B. 1846, p. 17; id. Cat. B. Mus. As. Soc. p. 61 (1849); Bp. Consp. Volucr. Zygod. p. 9 (1854, pt.); Reichenb. Handb. Scans. Picinæ, p. 403. no. 941, pl. dclviii. figs. 4375, 4376, ♀ ♂ (1854); Jerd. B. Ind. i. p. 294 (1862); Blyth, Ibis, 1867, p. 297; Hume, Str. F. 1873, p. 434; Blanf. Ibis, 1874, p. 92; Legge, Str. F. 1875, p. 201; id. Ibis, 1875, p. 283; Fairbank, Str. F. 1876, pp. 255, 265; Hume, op. cit. 1877, pp. 480, 481; id. op. cit. 1879, p. 88; Legge, B. Ceyl. p. 200 (1880); Butl. Cat. B. S. Bomb. Presid. p. 24 (1880); Vidal, Str. F. 1880, p. 53; Butl. t. c. p. 386; Salvin, Cat. Strickl. Coll. p. 403 (1882); Davison, Str. F. x. p. 356 (1883).

Phaiopicos jerdoni, Malh. N. Classif. Mém. Acad. Metz, 1848–49, p. 338; id. Rev. Zool. 1849, p. 535.

Meiglyptes gularis, Gray, Gen. B. iii. App. p. 22 (1849); Bp. Consp. Gen. Av. i. p. 113 (1850); Gray, List Picid. Brit. Mus. p. 125 (1868); id. Hand-l. B. ii. p. 203. no. 8841 (1870).

Micropternus phaioceps (non Blyth), Layard, Ann. & Mag. Nat. Hist. 2nd ser. xiii. p. 450 (1854).

Phaiopicus jerdoni, Malh. Monogr. Picid. ii. p. 3, pl. xlvii. figs. 1, 2, 3 (1862).

Picus gularis (non Wagl.), pt., Sundev. Consp. Av. Picin. p. 89 (1866); Giebel, Thes. Orn. p. 157 (1876).

Adult male. Entire plumage bright rufous, the top of the head and the throat darker; the back and scapularies faintly barred with blackish; wing-coverts barred and spotted with black; bastard wing, primary-coverts, and quills barred with black, the barring broader on the inner webs of the quills, the tips of the outermost being black and the shafts reddish brown; rump with almost obsolete dusky barring; upper tail-coverts narrowly barred with black; tail also very narrowly barred with the same, the bars being about one third the width of the intervening rufous space; tips of central feathers black; tail-shafts brown; nasal plumes, forehead, and crown dusky brown, the feathers with rather lighter and more rufous margins; lores and sides of the face slightly lighter than the crown, the feathers of the loral region and cheeks edged with brighter rufous; a large crimson patch under the eye; the feathers of the chin and throat having a transverse and somewhat heart-shaped dusky-brown spot at the tip and margined with whitish, this white margin confined to the extreme tip of the feather; sides of the neck and from the fore neck, inclusive, downwards uniform, brighter in colour on the side of the neck, fore neck, and chest; the flanks, thighs, and under tail-coverts faintly barred with blackish, the barring almost obsolete on the under tail-coverts; under wing-coverts and axillaries rufous, the former barred with blackish. Total length 9·0 inches, culmen 1·25, wing 5·0, tail 2·6, tarsus 0·9; toes (without claws)—outer anterior 0·7, outer posterior 0·6, inner anterior 0·55, inner posterior 0·23. Col. Legge gives the soft parts in this sex as follows:—"Iris chestnut-brown in some, brownish red in others; bill black, with a slate-coloured, or sometimes a greenish, line at the sides of the lower mandible; legs and feet 'slaty' or blackish plumbeous."

Adult female. Differs from the adult male in wanting the red spot under the eye: "bill dull black; legs, feet, and claws the same, but tinged with plumbeous; irides deep brown" (*W. Davison*). Total length 8·5 inches, culmen 1·1, wing 4·8, tail 2·4, tarsus 0·88.

The habitat of this species is the peninsula of India and Ceylon. Mr. Vidal records it from South Konkan. Capt. Butler, in his 'Catalogue of Birds of the Southern Portion of the Bombay Presidency,' observes:—"Permanent resident. It is not uncommon, and occurs all along the Sahyadri range and in the adjacent forests as far north as Khandâla. Some of the specimens procured by Mr. Vidal in the north of Ratnâgiri are pronounced by Mr. Hume to be intermediate between *gularis* and *phaioceps*." Mr. Fairbank found it at Khandâla and Mahabaleshwar on the western declivities. Mr. Davison has obtained it at Ootacamund, but says its occurrence at that elevation is exceptional; he further remarks—"it occurs, but nowhere numerously, on the slopes of the Nilghiris in the Wynaad and Mysore country. It avoids the heavy forest, frequenting thin tree and bamboo jungle." I have in my cabinet a specimen from Travancore (*Dr. Day*). Mr. Layard says it is "decidedly a rare species in Ceylon, and almost confined to the south." According to Col.

Legge, however, this species is widely distributed in that island, although perhaps more rare in the north: it appears to be met with throughout the low country, and Mr. Bligh has seen it up to about 2000 feet elevation. Ceylonese examples of this species are darker above and more distinctly barred with black.

4. MICROPTERNUS BRACHYURUS.

Picus brachyurus, Vieill. N. Dict. Hist. Nat. xxvi. p. 103 (1818); Bonn. & Vieill. Enc. Méth. p. 1324 (1823); Wagl. Syst. Av. no. 71 (1827); Drap. Dict. Class. Hist. Nat. xiii. p. 505 (1828); Sundev. Consp. Av. Picin. p. 89 (1866); Giebel, Thes. Orn. p. 145 (1876).

Picus badius, Raffl. Trans. Linn. Soc. xiii. p. 289 (1822); Less. Compl. Buff. ix. p. 313 (1837); Sundev. Consp. Av. Picin. p. 90 (1866); Giebel, Thes. Orn. p. 143 (1876).

Hemicircus badius, Eyton, P. Z. S. 1839, p. 106.

Micropternus badius, Blyth, J. A. S. B. xiv. p. 551 (1845); id. Cat. B. Mus. As. Soc. p. 61 (1849); Reichenb. Handb. Scans. Picinæ, p. 403. no. 940, pl. dclviii. fig. 4374 (1854); Horsf. & Moore, Cat. B. E.I. Co. Mus. p. 666 (1856–58); Hume, Str. F. 1875, p. 319; Tweedd. Ibis, 1877, p. 289; Salvad. Ann. Mus. Civ. Genov. xiv. p. 184 (1879); Nicholson, Ibis, 1881, p. 141; id. op. cit. 1882, p. 55.

Meiglyptes brachyurus, Gray, Gen. B. iii. App. p. 22 (1849); Bp. Consp. Gen. Av. i. p. 113 (1850); Gray, List Picid. Brit. Mus. p. 125 (1868); id. Hand-l. B. ii. p. 203. no. 8843 (1870).

Phaiopicos brachyurus, Malh. N. Classif. Mém. Acad. Metz, 1848–49, p. 337; id. Rev. Zool. 1849, p. 536.

Micropternus gularis (pt.), Reichenb. Handb. Scans. Picinæ, p. 403. no. 941, pl. dclviii. figs. 4375, 4376, ♀ ♂ (1854).

Micropternus brachyurus, Bp. Consp. Volucr. Zygod. p. 9 (1854); Gray, List Gen. 1855, p. 94; Hume, Str. F. 1877, pp. 480, 481; id. & Davison, op. cit. 1878, vi. p. 145; Hume, op. cit. 1879, pp. 52, 88; Müller, Orn. Ins. Salanga, p. 72 (1882); Oates, B. Brit. Burm. ii. p. 58 (1883).

Phaiopicus brachyurus, Malh. Monogr. Picid. ii. p. 5, pl. xlvi. figs. 4, 5 (1862).

Picus squamigularis, Sundev. Consp. Av. Picin. p. 89 (1866).

Meiglyptes badius, Gray, List Picid. Brit. Mus. p. 126 (1868); id. Hand-l. B. ii. p. 203. no. 8845 (1870).

Meiglyptes squamigularis, Gray, List Picid. Brit. Mus. p. 126 (1868); id. Hand-l. B. ii. p. 203. no. 8844 (1870).

Adult male. Entire back, rump, wings and their coverts, tail and tail-coverts rufous, barred with black; the apical portion of the inner webs of the primaries black for about one inch of their length; the black barring on the tail-feathers well defined and considerably broader than the rufous interspace, and the tips of these feathers black; head rufous-buff, the feathers of the forehead and crown centred with dusky brown, those under the eye tipped with red, this colour spreading on to some of the ear-coverts; cheeks, chin, and throat dark brown, the feathers margined with and having a basal stripe of buff; nape, hind neck, side of the neck, chest, and breast uniform rich rufous; abdomen, vent, and under tail-coverts dusky rufous, barred with black, the barring very faint on the abdomen; sides of the body, flanks, and thighs rufous, barred with black; under wing-coverts and axillaries rufous-buff, with dusky transverse markings: "irides reddish brown; upper mandible black; lower mandible black at tip, and behind dirty white; legs and feet grey" (*H. O. Forbes*). Total length 7·5 inches, culmen 1·05, wing 4·25, tail 2·25, tarsus 0·83; toes (without claws)—outer anterior 0·62, outer posterior 0·57, inner anterior 0·47, inner posterior 0·25.

Adult female. Differs from the adult male in wanting the red patch under the eye. Total length 7·0 inches, culmen 1·0, wing 4·2, tail 2·05, tarsus 0·8.

Immature birds have the head lighter, and the feathers of the chin and throat of a less dark brown. In very young specimens the dark centres to these feathers are of a still paler brown, and the dark centres of the occipital feathers have a spotted character. A young female in my collection has some of the rufous feathers of the nape tinged with red; but this colour I have never observed on the nape of any other specimen, and regard as purely accidental.

This species does not appear to range north of Tavoy, but is found throughout the southern portion of Tenasserim. Mr. Hume's collection contains examples from Mergui, Pakchan, Bankasoon, and Malewoon. It is also found in the Malayan peninsula; and Mr. Hume gives the following localities:—Penang, Malacca, Pulo Seban, Singapore, and Wellesley Province. I also have in my cabinet a specimen from the island of Salanga (*Weber*). It appears to be fairly common in Sumatra, Bangka, and Java; the Leiden Museum contains numerous examples from these localities. Typical specimens from Java are larger than the Sumatran bird, and have the feathers of the throat blacker, with white margins. Examples from Bangka are intermediate between the Javan and Sumatran birds.

5. MICROPTERNUS FOKIENSIS.

Brachypternus badius (non Raffl.), Swinh. Ibis, 1861, p. 267.

Brachypternus fokiensis, Swinh. P. Z. S. 1863, p. 87; id. Ibis, 1868, p. 63.

Micropternus fokiensis, Swinh. P. Z. S. 1863, p. 267; id. op. cit. 1871, p. 393; David & Oust. Ois. Chine, p. 54 (1877).

Picus fokiensis, Sundev. Consp. Av. Picin. p. 91 (1866); Giebel, Thes. Orn. p. 154 (1876).

Meiglyptes fokiensis, Gray, List Picid. Brit. Mus. p. 126 (1868); id. Hand-l. B. ii. p. 203. no. 8847 (1870).

Micropternus brachyurus (pt.), Hume, Str. F. 1877, p. 481.

Adult male. Upper back uniform dark brown; middle and lower back, rump, scapularies, and wing-coverts blackish brown, narrowly barred with rufous; bastard wing and primary-coverts blackish brown, barred with rufous; quills barred brownish black and rufous on both webs; shafts reddish orange on the rufous portion of the web, and blackish where the feather is crossed by a black bar; the shafts of the inner quills blackish brown; upper tail-coverts barred black and rufous; tail rufous, crossed by fine bars of black, these bars being rather narrower than the rufous interspaces; shafts reddish or purplish brown; lores, forehead, crown and occiput, sides of the face, and upper neck brownish buff, the feathers having dark-brown central stripes; below the eye a patch of crimson; hind neck and lower side of the neck more rufous than the head, the feathers having similar central stripes; chin and throat buff, each feather centred with a very dark brown stripe; fore neck and chest rufous; entire under surface of the body dark brown, the flanks and thighs barred with rufous; under tail-coverts dull rufous, with either an intermarginal blackish line or transverse and other varied blackish markings; under wing-coverts rufous, varied with black. Total length 9·0 inches, culmen 1·12, wing 5·1, tail 2·8, tarsus 0·9; toes (without claws)—outer anterior 0·7, outer posterior 0·7, inner anterior 0·55, inner posterior 0·23.

Male, apparently not fully adult (Swinhoe's type). Entire back, scapularies, and rump blackish brown, narrowly barred with rufous; wing-coverts, also the bastard wing and primary-coverts, barred blackish brown and rufous, the latter barring broader on these parts than on the back; quills rufous, barred across both webs with black; shafts reddish, those of the inner secondaries more dusky brown; upper tail-coverts clearly barred rufous and black, the width of barring about equal; tail rufous, barred with black, the latter about half the width of the intervening rufous space; shafts reddish brown; nasal plumes, also the entire head, neck, chin, and throat, light buffy brown, almost all the feathers having a dusky brown central stripe, these striations being strongly marked on the chin and throat; feathers under the eye tipped with crimson; under surface of the body dusky brown, brighter rufous on the chest; the feathers of the flanks, thighs, and under tail-coverts, also a few on the abdomen, rufous, barred with blackish brown; under wing-coverts uniform rufous; axillaries barred rufous and black: "bill bluish grey, with more or less greenish yellow on the lower mandible; iris reddish brown; legs and claws greenish slaty" (*Swinhoe*). Total length 8·5 inches, culmen 1·1, wing 5·0, tail 2·9, tarsus 0·88; toes (without claws)—outer anterior 0·7, outer posterior 0·65, inner anterior 0·55, inner posterior 0·22.

Adult female. Differs from the adult male in wanting the red patch under the eye. Total length 9·0 inches, culmen 1·15, wing 4·95, tail 2·95, tarsus 0·85.

Nestling. In general coloration and marking almost identical with the adult, but differing in having the upper back barred black and dull rufous; the striations on the throat of a less dark brown, and the under wing-coverts almost uniform pale rufous.

Swinhoe's type specimen of the female has the head darker and more washed with rufous-brown than any other example I have seen. It is apparently a fully adult bird, but all the other specimens which I have examined have the head and neck conspicuously lighter than the rest of the body and of a buff colour. The descriptions of the adult birds are taken from examples in the British Museum, and I have also given that of Swinhoe's male type, a bird apparently not fully adult.

Swinhoe first recorded this species in 'The Ibis' for 1861, p. 267, under the heading of *Brachypternus badius*. The specimen was procured by himself in Foochow, and he afterwards more fully described the species in the 'Proceedings of the Zoological Society,' 1863, p. 87, under the name of *Brachypternus fokiensis*, giving the soft parts and measurements of both sexes, and adding, "I have never received this bird from any part of China but Foochow, where it is not particularly common." The above-mentioned ornithologist, in 'The Ibis' for 1868, p. 63, mentions having received from one of his hunters three females and one male, collected on the Tingchow mountains, about 120 miles north-east from Amoy. Swinhoe remarks that one female had the head and neck of a pale reddish cream-colour, the feathers marked with blackish brown and chestnut in the middle; and this he believes to be the fresh-moulted bird. I would observe that examples having the bill entirely black, and the abdomen with dusky crescent-shaped markings, are, in my opinion, immature, adult birds having a yellow spot at the angle of the lower mandible and the under surface of the body entirely uniform. Although the prevailing colour of the head and neck in birds of this species is light ochreous brown, individuals do occur (apparently equally adult) in which these parts are of a rufous-brown. The Leiden Museum contains an example of the present species said to have been procured in Cochin China (*Verreaux*).

Mr. Hume makes *M. fokiensis* a synonym of *M. brachyurus*; but I cannot agree with this author that, "according to Swinhoe's own showing, the Foochow bird is referable to *M. brachyurus*," for even in the first record of the bird in 'The Ibis' for 1861, p. 267, as *M. badius*, Swinhoe adds, p. 409, *t. c.* :—"The *Brachypternus* from Foochow is much larger (nearly double the size) than *B. badius* of Java. It is of a much richer brown, but would appear otherwise similar." These remarks were made before he described the Foochow bird as a distinct species.

6. MICROPTERNUS HOLROYDI.

Micropternus holroydi, Swinhoe, Ibis, 1870, p. 95; id. P. Z. S. 1871, p. 393; David & Oust. Ois. Chine, p. 54 (1877).

Picus holroydi, Giebel, Thes. Orn. p. 159 (1876).

Adult male (type). Entire back, rump, and scapularies dark brown, with narrow and almost obsolete rufous barring; wing-coverts, bastard wing, and primary-coverts barred rufous and black; quills barred rufous and black across both webs, tips of the outermost primaries black; shafts of quills reddish, those of the inner secondaries inclining to dark brown; upper tail-coverts rufous, barred with black; tail rufous, with not more than six transverse black bars, these being slightly narrower than the rufous space between; shafts reddish brown; nasal plumes, lores, and entire head and throat brown, the feathers having paler margins; occiput, nape, and sides of the neck like the head, but the margins of the feathers are more rufous; the feathers at the base of the upper mandible, also those under and behind the eye, tipped with crimson; under surface of the body rufous-brown, brighter on the chest and breast; the thighs barred rufous and black; under tail-coverts rufous, faintly barred with black; under wing-coverts rufous, covered with bar-like spots of black; axillaries rufous, striped with blackish: "irides ochreous white; bill deep bluish grey, with the greater part of the lower mandible and edge of the upper greenish yellow; legs and claws slate-colour, tinged with green" (*Swinhoe*). Total length 7·5 inches, culmen 1·0, wing 4·5, tail 2·4, tarsus 0·85; toes (without claws)—outer anterior 0·65, outer posterior 0·62, inner anterior 0·47, inner posterior 0·2.

Adult female (type).—Differing from the adult male in the absence of the crimson spot under the eye. Swinhoe gives the soft parts the same as in the male. Total length the same as in the male. Total length 7·5 inches, culmen 1·05, wing 4·75, tail 2·45, tarsus 0·87.

This species was first procured by Swinhoe at Tai-ping-sze, Central Hainan, and appears to be confined to that island. *M. holroydi* may be distinguished from *M. fokiensis* by its very much smaller size, its darker crown and occipital feathers, and the paler centres to the throat-feathers. The measurements of the two species are as follows:—

M. holroydi.

	Total length.	Culmen.	Wing.	Tail.	Tarsus.
♂ ad.	7·5	1·0	4·5	2·4	0·85
♀ ad.	7·5	1·05	4·75	2·45	0·87

M. fokiensis.

♂ ad.	8·3	1·1	5·0	2·8	0·85
♀ ad.	9·5	1·12	5·23	3·0	0·83

Mr. Hume (Str. F. 1877, p. 481) makes *M. holroydi* (with a query) a synonym of *M. phæoceps*, but says that he has not seen the bird.

II.—*On the Muscicapine Genus* Chasiempis.

By P. L. Sclater, M.A., Ph.D., F.R.S.

(Plate I.)

Among some specimens of birds which the authorities of the Smithsonian Institution have kindly sent over for my examination are the two skins upon which Mr. Ridgway based his *Chasiempis sclateri* (Proc. U. S. N. Mus. 1881, p. 337). Having had the opportunity of comparing these skins with the examples of *Chasiempis* in the British Museum, I am enabled to offer a few remarks on this little-known type of the family Muscicapidæ.

Latham was the first author who noticed this peculiar Sandwich-Island form. In the second volume of his 'General Synopsis' (p. 334) is described the "Sandwich Flycatcher," from a specimen in the "collection of Sir Joseph Banks," as follows :—

"Length five inches and a half. Bill black, bristly at the base, where it is yellowish; forehead buff-coloured; over the eye a white line; the upper parts of the body brown; wing-coverts edged with pale rust-colour; greater quills brown; both of them tipped with dusky white; tail brown; all the feathers, except the two middle ones, tipped with white; the chin is pale, marked with dusky streaks; on each side of the neck a mixture of white; breast rust-colour; belly and vent yellowish white; legs black. Inhabits the *Sandwich Islands*."

A little lower down, Latham gives the subjoined description of this Spotted-winged Flycatcher, which is generally supposed to be the female of the same species :—

"Bill black; base of the under mandible yellow at the edges; the plumage on the upper parts of the body ferruginous brown; the head palest; on each of the wing-coverts, at the tip, is a round ferruginous white spot; the rump ferruginous; quills dusky; the underparts of the body pale reddish brown, changing to reddish white on the bottom of the belly; vent the same, but the feathers tipped with still paler colour; tail brown; the outer feathers marked at the tip of the inner web with white; legs black. Supposed to inhabit the Sandwich Islands."

Upon the first of these descriptions Gmelin established his *Muscicapa sandwichensis,* and upon the second his *M. maculata.*

Beyond quoting these names, subsequent authors appeared to have done little with the present species until 1847, when Dr. Cabanis instituted his genus *Chasiempis* for *Muscicapa sandwichensis,* and pointed out the significance of this Sandwich-Island bird belonging to the true Muscicapidæ, and not to the Tyrannidæ.

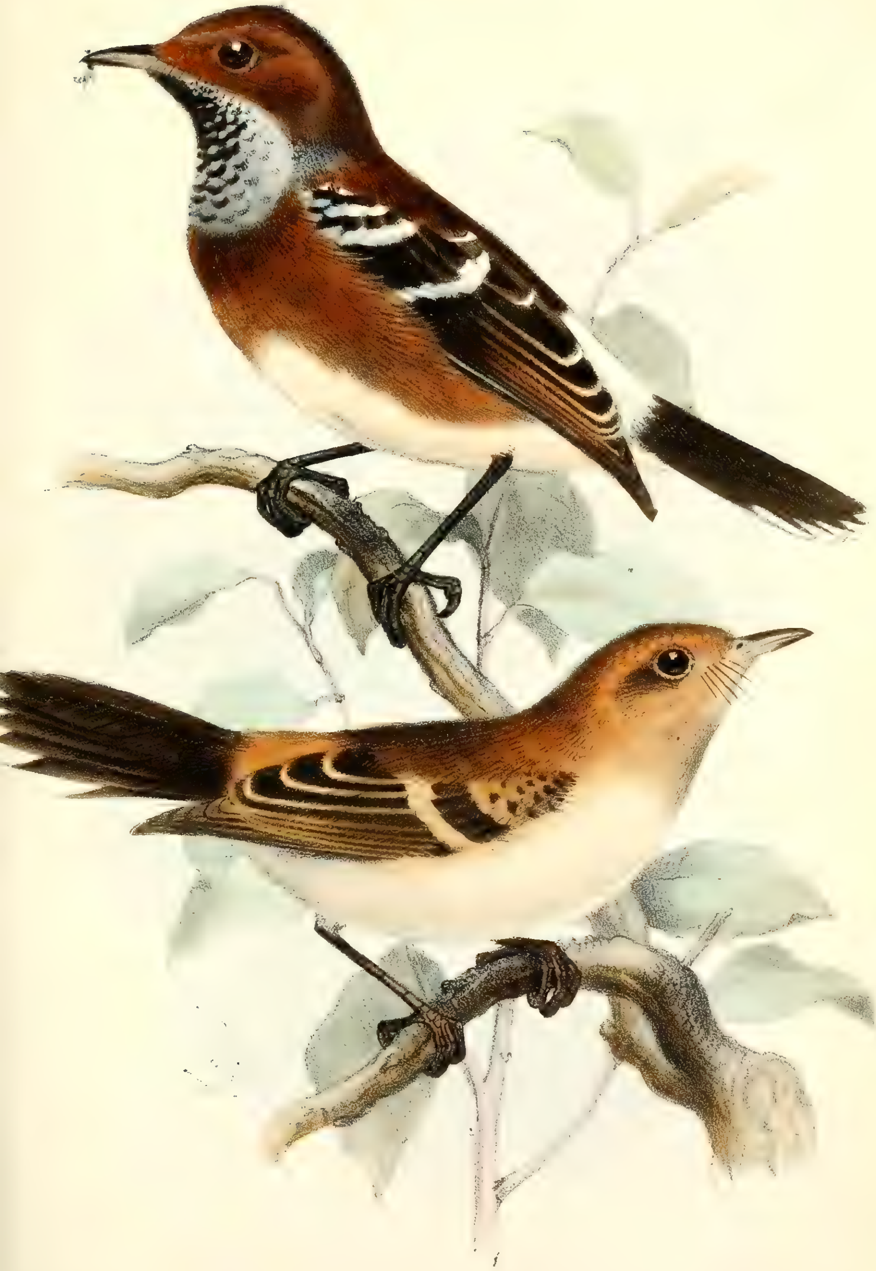
Notwithstanding this warning, I inserted, in 1862, in my 'Catalogue of American Birds' a specimen of the female of *Chasiempis sandwichensis,* then in my collection, as a "*Cnipolegus,* sp. inc." I had purchased this skin of Verreaux, of Paris, labelled "Chili," and was quite unaware of what it really was (never having seen an example of *Chasiempis sandwichensis*) until I took it over to Berlin some years later, where Dr. Cabanis kindly determined it for me by comparison with the specimens of both sexes of this species in the Berlin Museum. This skin I subsequently presented to the British Museum *. It is the original of the accompanying figure (Plate I. fig. 2).

The next time this species came under my notice was when I was determining the birds of the voyage of the 'Challenger.' Amongst the specimens collected during the short sojourn of the 'Challenger' expedition in Hilo Bay, in Owhyhee, Hawaian group, in August 1875, were two examples of *Chasiempis sandwichensis.* These were labelled as females, but are, I think, males of this species. They are now in the British Museum, and the figure (Plate I. fig. 1) has been taken from one of them.

Now the two specimens upon which Mr. Ridgway has based his *Chasiempis sclateri* (Proc. U. S. N. M. 1881,

---

* See Cat. B. Brit. Mus. iv. p. 232. The specimens at Berlin were obtained by the celebrated collector Deppe, in Oahu, as Dr. Cabanis kindly informs me.—P. L. S.



J. Smit lith.

Hanhart imp.

CHASIEMPIS SANDWICHENSIS.

p. 337) agree completely with the specimen now figured (Plate I. fig. 2), which was formerly in my collection. If, therefore, I am correct in referring the last-named specimens to the female of *C. sandwichensis*, then *C. sclateri*=*C. sandwichensis* ♀. And should it prove eventually that these two forms are not male and female, but belong to two different species, a view which receives some support from the fact that the two 'Challenger' skins are marked as "female" by the collector (though I am strongly of opinion that this was an erroneous determination), yet even then the name "*sclateri*" will apparently have to yield to *maculata*, Gm.—the *Muscicapa maculata* of Gmelin having been, as it would seem, based on a female of this species.

It should be acknowledged that Mr. Ridgway appears in this case to have been rather misled by Mr. Sharpe, who in the 'British Museum Catalogue,' iv. p. 232, has omitted any description of the female of *Chasiempis sandwichensis*, although the only specimen then belonging to the Museum was of that sex, and has only given a description of the male from the 'Challenger' expedition. It is true that both sexes are introduced into the diagnoses (p. 231); but the characters set forth seem to be intended to separate the two sexes of *Ch. sandwichensis* from the corresponding sexes of *Ch. dimidiata*, and are not sufficient to separate the two sexes of *Ch. sandwichensis* from one another.

III.—*On the Aftershaft in the Feathers of certain Birds.*

By F. E. Beddard, M.A., F.Z.S., Prosector to the Zoological Society of London.

My attention has been directed to a recent number of the 'Actes de la Société Linnéenne de Bordeaux,' which contains part of a memoir by Dr. A. T. de Rochebrune upon the fauna of Senegambia*.

The paper in question deals with the birds of this region;

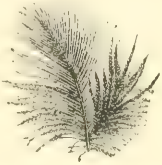
---

* "Faune de la Sénégambie, Oiseaux," par le Dr. A. T. de Rochebrune, Actes d. la Soc. Linn. de Bordeaux, sér. 4, t. viii. March 1884, p. 85.

it is prefaced with some general considerations, in which the author brings forward a great number of facts relating to the presence or absence of the structure known as the aftershaft in the bird's feather, and in many cases contradicts the statements made by Nitzsch in his classical work upon Pterylography *.

Thus, with respect to the Swifts, in which birds the feathers are stated by Nitzsch to be furnished with an aftershaft, Dr. Rochebrune remarks:—"Malgré nos recherches les plus minutieuses, aucune espèce des genres *Cypselus*, *Chætura* &c., ne nous a fourni de plume adventice, et nous affirmons que toutes indistinctement en sont dépourvues."

I have examined one species of each of these genera, viz. *Chætura zonaris* and *Cypselus apus*, and find that a distinct aftershaft *is* present in both of them. The accompanying woodcut is a copy of one of the pectoral feathers of the former species; the aftershaft is here large and well developed, attaining to rather more than half the length of the feather itself.



Pectoral feather of *Chætura zonaris*, from behind, to show the aftershaft.

In *Cypselus apus* the aftershaft is entirely similar.

In other cases it is rather difficult to follow Dr. Rochebrune's criticisms, and the discrepancies between his statements and those of Nitzsch seem often to be due to a different conception of what an aftershaft is. Nitzsch defines it as follows (*op. cit.* p. 89):—"The aftershaft originates from the underside of the feather beneath the umbiliciform pit; it resembles the main shaft, and, like it, emits two series of barbs, thus forming along with the shaft an apparently double feather . . . . . There are, however, a great many birds in which it is deficient, and in its place a few isolated barbs occur."

---

* 'Pterylography,' English edition (London, 1867).

Dr. Rochebrune, on the contrary, states of the aftershaft:—"La plume adventice, variable dans ses formes, ses dimensions, sa composition, n'est pas toujours unique; très souvent on en rencontre deux ou un plus grand nombre, distinctes, indépendantes les unes des autres, quoique en connexion par leur insertion sur la tige de la plume principale. Ce mode d'insertion n'est pas non plus invariablement fixe; on voit ces plumes adhérer tantôt directement à la face inférieure de la tige principale, tantôt en côté, soit au niveau de la cavité ombilicale citée par Nitzsch, soit en-dessus ou en-dessous, être sessiles ou pédicellées, posées en couronne etc., enfin dans aucun cas et sous aucun rapport, elles ne ressemblent à la plume principale."

The main difference therefore between the two definitions appears to be that the aftershaft, according to Dr. Rochebrune, is not always single, but that there are frequently several distinct and separate aftershafts present on the same feather. This may be true; but the facts brought forward by Dr. Rochebrune, so far as I have been able to verify them by comparison with the feathers themselves and even with his own figures, do not appear to confirm this statement. To take an instance; the aftershaft of *Numida* is described by Dr. Rochebrune in the following words:—"On trouve cinq plumes adventices distinctes, d'inégale longueur, sessiles sur la tige principale et à insertion commune; leurs barbules sont assez fortes, courtes et médiocrement rigides." A figure (*op. cit.* pl. iii. fig. 1) is given of one of the feathers of this bird, which is a sufficiently accurate representation of the original. The aftershaft consists of a short stem bearing on either side two or three barbs, *each of which* Dr. Rochebrune, if I understand him rightly, considers to be the equivalent of a single aftershaft, such as that which is stated to be found in *Perdix*. It does not appear to me, however, that this comparison is at all justifiable; the barbs of the aftershafts are entirely similar to those which spring from the lower portion of the main stem of the feather; the structure as a whole only differs from that of *Perdix* in being comparatively smaller and bearing fewer barbs; I do not at all follow Dr. Rochebrune's distinction between the two families. If the aftershaft be "single" in *Perdix* it certainly is so also in *Numida*.

In the feathers of *Cathartes* Dr. Rochebrune states the presence of a large aftershaft, while Nitzsch distinguishes this genus and *Pandion* from the rest of the Accipitrinæ Diurnæ by the absence of the same structure. In these two genera, however, as well as in the Owls, the aftershaft is not entirely unrepresented, but, as Nitzsch correctly says, its place is occupied by a tuft of isolated barbs; it is easy to separate the individual barbs by means of a needle, and to assure one's self that each springs *separately* from the main stem of the feather; the structure therefore does not fall within Nitzsch's definition of an aftershaft. This difference, which Nitzsch has pointed out between the Accipitrinæ Nocturnæ on the one hand and the Accipitrinæ Diurnæ, with the exception of the two genera *Cathartes* and *Pandion*, on the other, is perfectly plain. Dr. Rochebrune's definition of an aftershaft, however, does include this tuft of barbs; the aftershaft, according to him, is occasionally 'sessile' upon the feathershaft, and is not always borne upon a secondary shaft; the feathers of *Cathartes* and *Bubo maculosus* are furnished with an aftershaft of this kind, which is no doubt the equivalent of the 'true' aftershaft of the Accipitrinæ Diurnæ. Dr. Rochebrune is perhaps, strictly speaking, right in saying that the Accipitrinæ Nocturnæ are not devoid of an aftershaft; but he seems to have overlooked that Nitzsch himself had previously noticed this same structure, which he describes as occurring in the place of the aftershaft. Dr. Rochebrune has therefore not pointed out a new fact, but has merely recapitulated what Nitzsch said many years previously, failing, however, to emphasize the essential difference between the 'true' aftershaft of the Accipitrinæ Diurnæ and the tuft of isolated barbs which characterize the feathers of *Cathartes* and the Accipitrinæ Nocturnæ.

In the Parrots, according to Nitzsch, the contour-feathers have a large and distinct aftershaft [*]; Dr. Rochebrune does not dispute the accuracy of the fact, but makes Nitzsch responsible for having said exactly the reverse:—"Pour Nitzsch une plume adventice [†] large et distincte est probablement moins fréquente chez les Perroquets que chez les autres oiseaux." The quotation is correct, but the omission of a few words at the beginning destroys the true sense of the passage, which in the English translation runs as follows [‡]:—"*Contour-feathers with* a large and distinct aftershaft, very sparsely distributed, probably present in smaller comparative number than in any other birds."

Dr. Rochebrune compares the aftershaft in the three genera *Pœocephalus*, *Psittacus*, and *Palæornis* to that of the Accipitrinæ Nocturnæ, a comparison which does not hold good. In the feathers of these as of all other Parrots which I have had the opportunity of examining, the aftershaft resembles entirely another smaller feather attached to the base of the stem, and is not at all like that of the Accipitrinæ Nocturnæ; in these birds, as already said, there is merely a tuft of barbs occupying the same position, and no doubt corresponding to an aftershaft, but quite different in structure.

Dr. Rochebrune concludes his remarks upon the aftershaft by recapitulating the chief results to which he has been led, viz. that this structure is not absent in the Accipitrinæ Nocturnæ, as stated by Nitzsch, but is absent in the Cypselidæ, where Nitzsch describes its presence. The last conclusion of Dr. Rochebrune has been shown in the present note to be manifestly incorrect; with regard to the former, the tuft of barbs which represents the shaft in the Accipitrinæ Nocturnæ is, as Nitzsch has pointed out, quite different from the true aftershaft of the Accipitrinæ Diurnæ; to confound them, as Dr. Rochebrune has done, is to render useless a very convenient distinction between the two groups.

---

[*] *Op. cit.* p. 95.

[†] *Op. cit.* p. 99.

[‡] *Ibid.*

IV.—*Ornithological Notes from Corsica.*
By John Whitehead.

(Plate II.)

Arriving in Ajaccio in the middle of November 1882, I remained in the neighbourhood, shooting and collecting birds, until the beginning of January 1883, when I crossed the island to Aleria, and worked my way down the east coast to Bonifacio, and, *viâ* Sartene, back to Ajaccio. A great storm on the 12th March, which lasted three days, added many birds to my list, some of which I did not meet with again. On the 22nd of March I started for Bastia; but as the shooting on the lagoon there proved a failure, I left in two days for Ajaccio by the west coast, but during the whole journey hardly noticed a bird. In April I returned to the east coast, where I remained moving from place to place until the 15th of June. The shooting of the new Nuthatch induced a second trip, but only added thirty birds new to my list. As some of the best days of the season of passage were spent in the mountains, no doubt I missed a few birds.

The following notes are the result of some fifteen months spent in Corsica, most of the time being devoted to shooting. During the hotter months I kept out of the marshes as much as possible, so I was unable to take several interesting nests.

I cannot conclude without thanking several Corsican gentlemen, who did all in their power to assist me, also Mr. R. B. Sharpe for his notes on several species.

1. Bearded Vulture. *Gypaëtus barbatus.*

Seen on two occasions in the mountains in the middle of March. The shepherds say that they often lose lambs by this Vulture in spring. A schoolmaster told me he had a stuffed Eagle, shot near the town, which, when I went to see it, proved to be the much moth-eaten remains of a Bearded Vulture.

2. Golden Eagle. *Aquila chrysaëtus*

I visited two eyries of a large Eagle in the mountains; one nest was touched up with fresh pine-tops, but on June 12th was without eggs. The Eagle came within 100 yards once or twice; but as I was unable to shoot it, I cannot say for certain that it was of this species. The following year a shepherd told me he had taken an egg from a nest a short distance from the one I visited; it is needless to say he smashed it.

3. White-tailed Eagle. *Haliaëtus albicilla.*

Not uncommon on the large lagoons during the winter, where they prey chiefly on the wild fowl. I often saw a single bird in April and May, and was told by a fisherman that a large Eagle nested on the opposite coast of Sardinia.

4. Common Buzzard. *Buteo vulgaris.*

Fairly common everywhere. I found six nests during the month of April.

5. Small Peregrine Falcon. *Falco punicus.*

Not uncommon during the winter on the east coast. On the 14th of May I found a nest containing three young birds nearly ready to fly. The following year, hoping to take the eggs, I visited the old nest in the beginning of April, but the birds had changed their quarters. Seeing the old birds about, I did not give up the search, and on April 16th found them nesting some two miles from their old home, but, unfortunately, the nest contained four young about a week old.

6. Common Kestrel. *Tinnunculus alaudarius.*

Very common during the winter, but do not all remain to nest. Took a nest of six eggs, quite fresh, on 29th April.

7. Eleonora Falcon. *Falco eleonoræ.*

Several times I saw a pair of large dark-brown Hawks hovering about the sea-coast, first seen on 15th April. As I was unable to shoot them, it is uncertain that they belong to this species.

8. Sparrow-Hawk. *Accipiter nisus.*

Common in November, less so in the other winter months.

The only proof I had of the nesting of this species was an egg brought in by a boy on the 7th June.

9. COMMON KITE. *Milvus ictinus.*

Plentiful in the plains throughout the year, but I never found a nest.

10. HEN-HARRIER. *Circus cyaneus.*

A few seen throughout the winter. On April 14th quite a flight of these birds passed; I saw as many as five on the wing at the same time.

11. MONTAGU'S HARRIER. *Circus cineraceus.*

I saw a bird on November 17th which I have no doubt was of this species.

12. MARSH-HARRIER. *Circus æruginosus.*

Plentiful in all the marshes during the winter. One seen on June 21st, which was evidently breeding.

13. OSPREY. *Pandion haliaëtus.*

Fairly common on the lagoons during the winter. I found a nest on the 23rd April containing three eggs quite fresh. The nest was placed on a rock about 8 feet high, some 300 yards from the shore, in a small bay.

14. BARN-OWL. *Strix flammea.*

A boy brought in one alive on the 15th May; this was the only one seen.

15. LONG-EARED OWL. *Asio otus.*

The only one seen was brought to me by a man on December 18th.

16. SHORT-EARED OWL. *Asio brachyotus.*

I shot the only one seen on December 13th.

17. SCOPS OWL. *Scops giu.*

This small Owl becomes plentiful after the end of March. As soon as the sun has set they commence their soft whistling, often entering the villages. I found them high up in the mountains in May. I took a nest of four eggs on the 3rd of June, three of which were much sat upon, the fourth being nearly fresh.

18. Common Swift. *Cypselus apus.*

In 1883 first seen on 12th April, in 1884 on 8th April. When in the mountain-forests I noticed the Swifts entering the holes of the Great Spotted Woodpecker.

19. White-bellied Swift. *Cypselus melba.*

In 1883 first seen on 25th April, in 1884 on 10th April. I found this species nesting in some inaccessible rocks in the beginning of June.

20. Swallow. *Hirundo rustica.*

In 1883 first seen on 16th March, in 1884 on 22nd March. A few seen going south on 16th November. Numbers remain to nest.

21. Martin. *Chelidon urbica.*

In 1883 first seen on 20th March, in 1884 on 21st March. Numbers remain to nest.

22. Sand-Martin. *Cotile riparia.*

In 1883 first seen on 11th April, in 1884 on 8th April. Never seen in numbers. Though the river-banks, in places, were suitable, I never saw any sign of a nest, or of a bird after the passage was over.

23. Crag-Swallow. *Cotile rupestris.*

Fairly common and resident. With bad weather this bird comes down to the plains; otherwise it remains high up the mountain-sides during the whole year. I took a nest on May 13th with four fresh eggs.

24. Common Nightjar. *Caprimulgus europæus.*

First heard on 12th May, though they must have arrived some time before. First eggs taken 28th May.

25. Common Kingfisher. *Alcedo ispida.*

Numbers seen during the winter, but they began to get scarce after the end of January.

26. Common Bee-eater. *Merops apiaster.*

In 1883 first seen on 19th April, in 1884 on 14th April. About the middle of April, the natives told me that it was the time that the Bee-eaters arrive, and a day or two afterwards the first company put in their appearance, flying high over the plain, and uttering their monotonous note, *giep, giep*. On the 4th of June I opened several of their nests, which were bored in a level sandy field, running in about 9 feet from the entrance. All the nests contained their full number of eggs, which is from five to seven. The eggs were very dirty, being half buried in beetle's wings and remains of other insects, the whole nest being a moving mass of small maggots and various kinds of lice. The Bee-eater is rare on the west coast, the ground being unsuitable to their nesting-arrangements.

27. Hoopoe. *Upupa epops.*

In 1883 first seen on 24th March, in 1884 on 30th March. Fairly common in the plains. I took two nests out of holes in stone walls; the first on 27th May, with six eggs, quite fresh. I found a nest in an old tree on 7th June, with four young fully grown.

28. Great Spotted Woodpecker. *Dendrocopus major.*

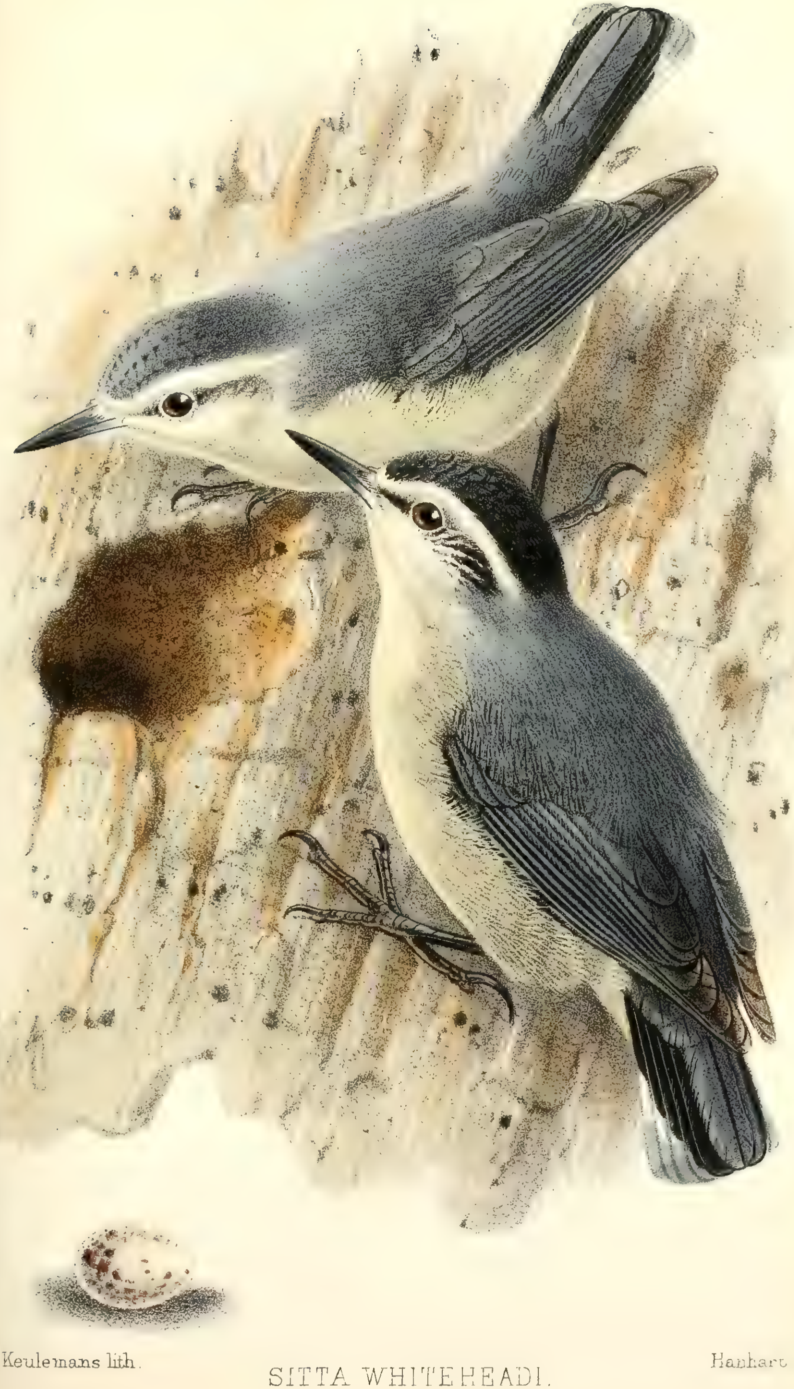
Common in the mountain-forests, often working down to the sea-coast in winter. First eggs taken on 20th May.

29. Wryneck. *Iynx torquilla.*

Only two seen, one on 8th January; the other a man had just shot, on 17th January.

30. Whitehead's Nuthatch. *Sitta whiteheadi.* (Pl. II.)

On the 12th June 1883, I left a small village to visit the nest of an Eagle which the shepherds had told me of. Starting at 4 a.m. with a mule and guide (taking provisions for two days), it was not until 2 p.m. that we reached the summit of the mountain. As it was close upon 6 o'clock before the nest had been visited, I decided to pass the night in a small stone hut (used by the shepherds during the hotter months). The next morning, wishing to get a shot at some Alpine Swifts, which were nesting in a high crag near, I got up early, and when returning heard a curious whistle, which I thought was that of the Crested Titmouse. After I had waited a few minutes a Nuthatch crept out to the end of a pine-bough



J.G. Keulemans lith.

Hanhart imp.

SITTA WHITEHEADI.

and was promptly shot. The bird being badly hit in the head, I skinned it at once, and thought no more about it until the month of October, when, wishing to know if I had correctly named a few small Warblers, I brought the skin of the Nuthatch to Mr. Sharpe, who assured me that he did not know the bird. At the end of the month, on the night of my departure, he wrote to me:—"There is no doubt your bird is a new species"*.

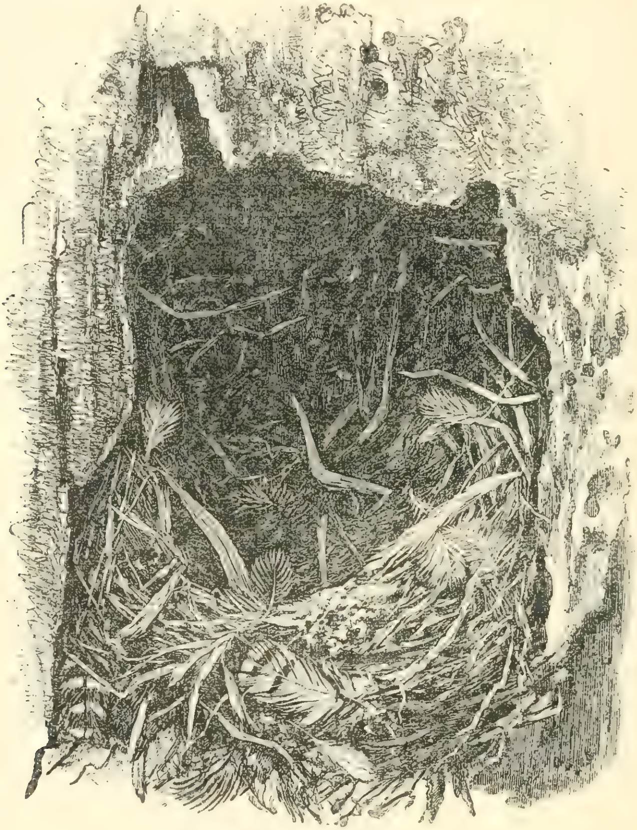
It was not until the 9th of May 1884 that I was able to make another trip. The first day I did not see a sign of the birds; but on the second, after wandering about until past mid-day, without seeing any thing but a few Golden-crested Wrens and European Coal Tits, I heard the same curious whistle, and looking about, soon saw and shot a bird which proved to be a beautiful specimen of the new Nuthatch, the head being jet-black, with well-marked and nearly white eyebrows, the underside of the beak being of a delicate blue, which soon faded after death. Knowing that the mate must be near, I remained quiet, and in a few minutes it shared the same fate; but great was my surprise, on picking it up, to find the black on the head entirely absent, the pale blue of the back running up to the base of the bill; this bird proved to be the female. A few hours later I came across a small band, three of which I shot.

On the 12th, provisions having fallen short, I was forced to return to my head-quarters; but on the 16th I returned to search for the nests and was most fortunate. The same evening I watched a pair, which I had noticed on my first visit, for some hours, and saw the female go twice to a very small and neatly-pecked hole in a very old pine-stump, some 20 feet from the ground. The following day I saw the male enter twice with nesting-materials.

It was not until the 20th of May that I found the second nest, and on the following day, whilst going to cut it out, found another, which I opened first. The nests proved in nearly every case to be most difficult of access, the trees being high, very rotten, without branches, and much too big to swarm; the once mighty giants of the forest—now but whitened skeletons, being in the last stage of decay.

---

* See Mr. Sharpe's articles, P. Z. S. 1884, pp. 233, 329, 414, pl. xxxvi.



Nest of *Sitta whiteheadi.*

The first nest took nearly three hours' hard work to reach, but once arrived at, was easily cut out; it contained five fresh eggs. The second nest was in a much worse position and quite 40 feet high; but by climbing up a neighbouring tree, with the aid of a rope I managed to swing to a branch, and soon cut open the nest, which contained five fresh eggs.

During eleven days spent in rambling about hunting for the nests of this species, I found no less than nine, three of which were in holes from 70 to 100 feet from the ground, the trees in places nearly eaten through with decay; so that it would have been foolish to have attempted to reach them.

This species spends much of its time pecking about at the ends of the pine-branches. When I opened their gizzards they contained many small beetles and other insects. The call-note is a soft whistle, repeated quickly many times, often ending with a peculiar hissing sound, which sounds like *sch-wer, sch-wer*. They were very fearless when their nest was attacked, the female often entering the nest and refusing to move until the entrance was nearly reached, whilst the male would take up his position a few feet above, examining everything that was going on.

All the nests found seemed to have been pecked out by the birds themselves, and in no case was clay used to make a hole smaller. The old holes of the Great Spotted Woodpecker were in hundreds in these trees, and though tenanted by Swifts and Titmice, the Nuthatches never used them. The holes were seldom neatly rounded, and in one instance only the sides of a large crack were pecked away. The nest is composed chiefly of strips of bark from the Mediterranean heath (which the birds themselves pull off) and moss, a few feathers, and a small quantity of hair. The sides of the cavity well padded, so as to form a cup.

The eggs, five or six, when blown, are white thickly speckled with *deep red*; they are about the size of those of the Great Titmouse.

The nest figured in the accompanying drawing (p. 30) was cut out of a tree which, after I had taken the eggs, was pulled down with a rope.

31. TREE-CREEPER. *Certhia familiaris.*

Not uncommon in the mountain-forest. Besides being a large bird, the Corsican Tree-creeper is pure white below, like the specimens in the British Museum from the Riviera and the south of France. It is also darker above than examples from other parts of Europe, the ground-colour of the head being black; but, unfortunately, I only brought one specimen, which is insufficient to make exact comparisons with.

32. Common Wren. *Troglodytes parvulus.*

Fairly common in the mountain-forests. Found a nest with eggs on June 11th.

33. Wheatear. *Saxicola œnanthe.*

In 1883 first seen on 24th March, in 1884 on 30th March. I saw a pair high on a mountain on 12th May, so perhaps some remain to nest.

34. Whinchat. *Pratincola rubetra.*

In 1883 first seen on 15th April, in 1884 on 20th April. The Whinchat only remains a few days.

35. Stonechat. *Pratincola rubicola.*

Common and resident, passing the winter months in the plains, nesting in the high valleys. Saw fully fledged young on 16th June.

36. Black Redstart. *Ruticilla titys.*

Common during the winter months; last noticed on the 28th March. I was unable to ascertain if this species breeds in the high mountains.

37. Redstart. *Ruticilla phœnicurus.*

Very few seen, first on 24th March, last on 19th April.

38. White-spotted Bluethroat. *Cyanecula wolfi.*

Shot the only one seen on the 28th March.

39. Redbreast. *Erithacus rubecula.*

Common during the winter. Found numbers nesting in the mountain-forests.

40. Nightingale. *Daulias luscinia.*

In 1883 first seen on 19th April, in 1884 on 7th April. This bird nests in numbers in all suitable localities. First eggs taken on 26th May. A Corsican gave me a good reason why the Nightingale sings both night and day during the nesting-season:—"Once a Nightingale, after building its nest and laying the eggs, went to sleep and forgot all about them; so finding that she was not provided with a memory, the male sang night and day to keep her awake, until the young were fledged."

41. WHITETHROAT. *Sylvia cinerea.*

Scarce, arriving about 20th April. A few seen after the middle of May in the high mountains.

42. LESSER WHITETHROAT. *Sylvia curruca.*

Fairly common and resident. Found a nest with four eggs quite fresh on the 19th April.

43. SUBALPINE WARBLER. *Sylvia subalpina.*

Plentiful, arriving about the middle of April. The first nest was taken on the 6th May. This little Warbler spends nearly all its time in the thick scrub, sometimes mounting high into the air and uttering a short but pretty song, then diving back into the dense bush, its whereabouts being only discoverable by a short chattering note. The nest is often frail, about 1½ inch deep, and 2¼ inches in diameter. It is composed of dry stalks, often a good many dead thistle-leaves, and lined with fine dry grass, sometimes with long horsehairs. The eggs four, of a pale yellowish or greenish white, are speckled all over, but especially at the larger end, with light brown and slate-blue.

44. SPECTACLED WARBLER. *Sylvia conspicillata.*

Owing to the difficulty of distinguishing and shooting all small Warblers, this bird escaped me during my first year. It was not until the 13th May, 1884, whilst hunting up some thick scrub high up on a hill-side, that I found a nest like that of the Subalpine Warbler; but as the eggs seemed larger, I snared the female. The nest was composed of the same materials as that of the Subalpine, and almost the same size. The eggs were similar, but with more bluish markings. I noticed several other examples of this species which were every now and then mounting in the air to sing, often perching on the top of a small tree or shrub.

45. SARDINIAN WARBLER. *Sylvia melanocephala.*

Fairly common and resident. This bird seems to prefer a bush in a well-sheltered position for its nest, often close to a wall. I found two nests, the first on 15th May, with eggs already hard-set. The nest is well made and solid, about $1\frac{3}{4}$ inch deep and $2\frac{3}{4}$ inches in diameter, composed of dry grass and other stalks, neatly lined with long horsehairs. Eggs four, of a very light green tint, thinly speckled with brown, and with a well-marked zone at the larger end.

46. Blackcap. *Sylvia atricapilla.*

Seems more numerous in the winter than in the summer. I found a nest with young a few days old on 29th May.

47. Dartford Warbler. *Melizophilus undatus.*

I only met with this little Warbler in two localities in February 1884. I was unable to visit the place again, so cannot say if the birds remained to nest.

48. Marmora's Warbler. *Melizophilus sardus.*

Fairly common and resident. I found it more plentiful high up on the mountain-sides, even in winter, than in the plains. I had the good fortune to find a nest with four eggs, a good deal sat upon, on 24th of April. The nest was placed in a cistus bush only a few inches from the ground; it is very solid (even more so than that of the Sardinian Warbler), about $1\frac{3}{4}$ inch deep, $2\frac{1}{8}$ inches diameter, composed of dried grass and other plant-stems, lined with long hair and fine grass. Eggs four, yellowish white, thickly speckled with light brown, and at the large end a dull grey zone. This Warbler spends most of its time chattering about in the thick machis, but in the spring sings a pretty song as it works hard with his wings high up in the air; it then suddenly drops into the scrub, where it makes its presence known only by a *chut, chut, chut,* uttered very sharply.

49. Goldcrest. *Regulus cristatus.*

Fairly common in the mountain-forests.

50. Firecrest. *Regulus ignicapillus.*

Fairly common. Remains in the plains throughout the year, though I found some as high as 2500 feet.

Mr. Bowdler Sharpe, writing on one of my specimens, says, "There is a distinct difference between it and English examples, as it has a grey eyebrow and grey collar round the neck, neither of which are seen in British specimens. But these occur in some examples from Teneriffe, and again in those from Japan, from which it seems scarcely possible to separate the Corsican bird."

51. CHIFFCHAFF. *Phylloscopus rufus.*

A winter visitor; none noticed during the spring.

52. WILLOW-WREN. *Phylloscopus trochilus.*

Numbers seen on March 24th.

53. GREAT REED-WARBLER. *Acrocephalus turdoides.*

I only met with this bird on 7th and 8th of May, during the passage.

I shot at a small bird on 17th of November, in the marshes, with well-marked streaks down each side of the bill, which I have no doubt was the Moustached Warbler, *Lusciniola melanopogon.*

54. CETTI'S WARBLER. *Cettia sericea.*

Common and resident in all the swamps. One of the happiest little songsters I have ever met with.

55. FANTAIL WARBLER. *Cisticola cursitans.*

Common and resident in all the swamps. Though I spent some time searching for it, I was unable to find a nest.

56. HEDGE-SPARROW. *Accentor modularis.*

Only a few seen during the winter months.

57. IRBY'S LONG-TAILED TITMOUSE. *Acredula irbii.*

Fairly common and resident, but more plentiful on the east coast. I watched a pair building their nest on 2nd April, which, in a few days, they left. Found two more nests, containing seven eggs each, on 20th April and 23rd May.

58. GREAT TITMOUSE. *Parus major.*

Common and resident. Found a nest with eight eggs on 27th May.

59. CONTINENTAL COAL TITMOUSE. *Parus ater.*

Fairly common and resident in the mountain-forests. I did not find this species in the plains during the winter. I saw a pair building their nest on May 18th.

60. Blue Titmouse. *Parus cæruleus.*

Fairly common and resident. I found a nest with six eggs on 14th May.

61. White Wagtail. *Motacilla alba.*

Tolerably common during the winter months.

62. Grey Wagtail. *Motacilla melanope.*

A few seen throughout the year. Several pairs observed on the mountain-streams in May.

63. Blue-headed Yellow Wagtail. *Motacilla flava.*

A good many seen passing from 22nd April to 1st of May.

64. Blue-headed Wagtail. *Motacilla cinereocapilla.*

Met with a large party of these birds migrating on 16th April.

65. Meadow-Pipit. *Anthus pratensis.*

Common during the winter months.

66. Tree-Pipit. *Anthus trivialis.*

Met with a small flock migrating on 21st April.

67. Tawny Pipit. *Anthus campestris.*

Plentiful after the end of April, and remaining to nest; but unfortunately I was unable to find one.

68. Rock-Pipit. *Anthus obscurus.*

One shot from a small flock feeding in a marsh on 25th March.

69. Missel-Thrush. *Turdus viscivorus.*

Scarce and resident. A few seen in the plains during the winter. I found this bird in the mountain-forests in the middle of May, with young fully fledged.

70. Song-Thrush. *Turdus musicus.*

Very common during the winter months; none seen after 19th April.

71. FIELDFARE. *Turdus pilaris.*

A few seen during some very stormy weather from 12th to 16th March, 1883.

72. BLACKBIRD. *Turdus merula.*

Very common during the winter; a few remain to breed; I found nests with full number of eggs after the middle of May.

73. RING-OUZEL. *Turdus torquatus.*

The only one seen settled within ten yards of me during the great storm of 12th March.

74. BLUE ROCK-THRUSH. *Monticola cyanus.*

Fairly common everywhere, often coming into the towns during the cold weather. It was not until the 14th May that I succeeded in finding a nest, which was placed in a cleft on some very high rocks, and contained four young birds a few days old.

75. PALE-BACKED DIPPER. *Cinclus albicollis.*

A few seen on most of the mountain-streams. The breast is somewhat of a brownish red, like that of the Pyrenean birds, and shows an approach to *C. cashmiriensis.*

76. GOLDEN ORIOLE. *Oriolus galbula.*

First noticed on 24th April. A few pass; last seen 29th May.

77. SPOTTED FLYCATCHER. *Muscicapa grisola.*

In 1883 first seen on 17th April, in 1884 on 5th May. Remains to nest in numbers. First eggs found 22nd May.

78. PIED FLYCATCHER. *Muscicapa atricapilla.*

In 1883 first seen on 17th April, in 1884 on 22nd April. A good many pass; none seen after 7th May.

79. RED-BACKED SHRIKE. *Lanius collurio.*

In 1883 first seen on 28th April, in 1884 on 5th May. One seen on 1st January. This Shrike is very common, nesting in numbers. First eggs taken 29th May.

80. WOODCHAT. *Lanius pomeranus.*

In 1883 first seen on 24th April, in 1884 on 15th April.

Out of some twenty nests I found only one which had the salmon-coloured eggs.

81. Alpine Chough. *Pyrrhocorax alpinus.*

Several large flocks seen, but I was unable to identify them until the 16th March, 1884. The natives assured me that these birds did not remain to nest, but I am much inclined to think that they do.

82. Common Chough. *Pyrrhocorax graculus.*

On January 29th I saw five of these birds, but having only small shot, failed to kill one. I saw five birds in the same place again on 16th March.

83. Common Jay. *Garrulus glandarius.*

Fairly common and resident. A boy brought me five eggs on 1st June.

84. Jackdaw. *Corvus monedula.*

A few seen in the winter along with the large flocks of Rooks which winter on the east coast.

85. Carrion-Crow. *Corvus corone.*

Rare; a few seen during the winter.

86. Hooded Crow. *Corvus cornix.*

Very common and resident; many nests taken after 26th April.

87. Rook. *Corvus frugilegus.*

Very common on the east coast during the winter, begins to get scarce towards the end of February; not seen after the beginning of March.

88. Common Raven. *Corvus corax.*

Fairly common and resident; three nests taken in 1884 on 11th and 16th April and 2nd May.

89. Common Starling. *Sturnus vulgaris.*

Seen in small flocks during the winter; not noticed after the end of February.

90. Goldfinch. *Carduelis elegans.*

Very common and resident. Nests found from 2nd May to 10th June.

91. CITRIL FINCH. *Chrysomitris citrinella.*

Common and resident. This little Finch in winter may be seen in large flocks about the towns, but with the spring retires to the higher elevations to nest; but on the 29th of April I found a nest on the sea-coast with young birds a few days old. On 14th May I found a nest with four fresh eggs; but higher up the mountains many birds had not built their nests by the end of May. The nest, generally placed in an arbutus bush, is composed of grass-stems, lined with feathers, being rather a rude affair in comparison with those of other Finches. Eggs four, like those of the Goldfinch.

92. SISKIN. *Chrysomitris spinus.*

Only met with on my second visit. I shot a male on February 4th: the birds remained until nearly the end of March.

93. SERIN FINCH. *Serinus hortulanus.*

Common and resident, but not quite so plentiful as the Citril. The Serin, unlike the Citril, Finch prefers to nest in the olive and cork trees, often quite close to the villages. Both birds have a very pretty habit in the nesting-time of rocking themselves about in the air, singing all the while, as though their life depended on it. I took two nests with fresh eggs on 8th and 16th April. The nest is a much more beautiful bit of work than the Citril's; it is round and neatly made, a good deal of spider's web and lichen being used, and neatly lined with short hair. The eggs four, like those of the Goldfinch, but smaller.

94. GREENFINCH. *Ligurinus chloris.*

Common and resident.

95. HAWFINCH. *Coccothraustes vulgaris.*

Fairly common and resident, but very local. I only saw one bird on the west coast. Took two beautiful nests, with six and four eggs respectively—on 16th May quite fresh, and 6th June much sat upon.

96. ITALIAN SPARROW. *Passer italiæ.*

Very common and resident. Is rather a late breeder; the boys brought in many eggs quite fresh on 8th June.

97. Rock-Sparrow. *Petronia stulta.*

Scarce and resident. Very few seen on the west coast, but one or two small flocks noticed on the east during the winter. I saw a few pairs, evidently nesting, in the high mountains at the end of May.

98. Chaffinch. *Fringilla cœlebs.*

Very common and resident. Found first eggs 11th May.

99. Linnet. *Linota cannabina.*

Common during the winter; very few remain to nest. I watched a pair building their nest in a high valley on 17th March.

100. Common-Crossbill. *Loxia curvirostra.*

Fairly common in the pine-forests. In May I noticed a few families of six or seven birds flying about; though I shot several, none had the bright-red plumage.

101. Common Bunting. *Emberiza miliaria.*

Fairly common and resident.

102. Cirl Bunting. *Emberiza cirlus.*

Common in the plains during the winter. In the nesting-season the greater number retire to the higher elevations. Found a nest with young birds and one with four fresh eggs on 6th of June.

103. Reed-Bunting. *Emberiza schœniclus.*

Only a few seen in the winter months.

104. Sky-Lark. *Alauda arvensis.*

Not nearly so common as the Wood-Lark; none seen after March.

105. Wood-Lark. *Alauda arborea.*

Seen in flocks during the winter. I found numbers of nests after 13th May.

106. Short-toed Lark. *Calandrella brachydactyla.*

Only a few seen on the east, but on 24th June in numbers on the west coast. I found two eggs on that date.

107. Common Cuckoo. *Cuculus canorus.*

In 1883 first seen on 15th April, in 1884 on 4th April. Common. I took five eggs from the nests of the Subalpine Warbler on May 17th and other dates.

108. Rock-Dove. *Columba livia.*

Fairly common and resident. Nesting in numbers. Took fresh eggs on May 18th.

109. Ring-Dove. *Columba palumbus.*

Common during the winter; found a few nesting in the mountain-forests in May.

110. Turtle-Dove. *Turtur communis.*

In 1883 first seen on 16th April, in 1884 on 22nd April, after which dates they became very common. First eggs found May 18th.

111. Red-legged Partridge. *Caccabis rufa.*

A few coveys seen, but these birds are shot down and poached at all seasons.

112. Common Quail. *Coturnix communis.*

Not uncommon on the east coast, where a good many are resident. First eggs found on 8th May.

113. Common Pheasant. *Phasianus colchicus.*

I believe at one time fairly common, but now only to be found on the plain of Fiumorbo. Only two were shot during two months spent in the neighbourhood.

114. Stone-Curlew. *Œdicnemus scolopax.*

Only met with on a sandy plain at the head of the Gulf of Ajaccio. Thinking they might be resident, I visited the plain on 21st June, and, as I expected, turned up several pairs.

115. Golden Plover. *Charadrius pluvialis.*

Abundant during the winter on the east coast.

116. Kentish Plover. *Ægialitis cantiana.*

Fairly common and resident. In the winter families of five may be seen. In April I found a few pairs in every sandy bay, and eggs were taken on 23rd and 28th of that month.

117. Little Ringed Plover. *Ægialitis curonica.*
One shot on 27th April, in company with two or three others, were the only ones seen.

118. Lapwing. *Vanellus vulgaris.*
Very common during the winter; not noticed after March 14th.

119. Oyster-catcher. *Hæmatopus ostralegus.*
Only once seen at the mouth of a river on the evening of 26th April.

120. Black-winged Stilt. *Himantopus candidus.*
The only one seen was in company with a flock of Greenshanks on 30th April.

121. Woodcock. *Scolopax rusticula.*
Woodcocks are plentiful in the months of December and January. Owing to the thickness of the machis but poor sport is to be obtained; three or four a day would be thought very good.

122. Great Snipe. *Gallinago major.*
I only met with three, one of which I shot on 25th March.

123. Common Snipe. *Gallinago cælestis.*
Plentiful in November and March. A good many remain throughout the winter. I saw the last on 30th April.

124. Jack Snipe. *Limnocryptes gallinula.*
Common in February on the east coast, where this species predominates. Last seen 27th March.

125. Dunlin. *Tringa alpina.*
A few noticed during the winter on the east coast. I shot one on 16th March.

126. Little Stint. *Tringa minuta.*
Only three or four seen. I shot a pair well advanced in their summer plumage on 7th May.

127. Temminck's Stint. *Tringa temmincki.*
A pair seen on 7th May, one of which I shot.

128. Pygmy Curlew. *Tringa subarquata.*

This bird passes in small flocks of from three to fifteen in number. On 8th May 1883 I shot three, one in good summer plumage; on the 16th May I saw a large flock all in the red plumage. On 7th May 1884 I saw a small flock and shot one in full summer dress.

129. Ruff. *Machetes pugnax.*

Saw several small flocks from 15th to 28th of April.

130. Common Sandpiper. *Tringoides hypoleucus.*

Fairly common during the winter. None noticed after 30th April.

131. Green Sandpiper. *Helodromas ochropus.*

A few seen during the winter, one as late as 28th May.

132. Wood-Sandpiper. *Totanus glareola.*

First observed on April 12th, and from time to time until 28th May.

133. Redshank. *Totanus calidris.*

A few seen during the winter on the lagoons. Last seen on 2nd June.

134. Greenshank. *Totanus canescens.*

A few seen during the winter. In 1883 and 1884 a good many passed on 8th of May.

135. Black-tailed Godwit. *Limosa ægocephala?*

I saw a Godwit on 23rd April along with a Greenshank. When it flew it seemed to be of this species; but as I was unable to shoot it, I cannot say for certain.

136. Common Curlew. *Numenius arquata.*

Fairly common during the winter months. Last seen 11th May.

137. Common Heron. *Ardea cinerea.*

Not uncommon on the east coast during the winter. I think they must nest in Corsica, as I saw a few as late as the 25th April.

138. PURPLE HERON. *Ardea purpurea.*

Common on the east coast from 14th to 27th April; not observed later.

139. LITTLE EGRET. *Ardea garzetta.*

Only two seen, on 19th April. After hunting them for two days I shot one on 21st; the other remained in the neighbourhood until the 28th April. As my bird was badly shot I made a rough skin of it, which I handed over to Mr. Sharpe. Mr. Howard Saunders, who has examined the specimen, identifies it as *A. garzetta.*

140. SQUACCO HERON. *Ardea ralloides.*

Only one seen, on 25th April.

141. NIGHT-HERON. *Nycticorax griseus.*

A small flock of eight arrived on 14th April; from time to time one or two more were added, until they were fourteen in number. Not seen after 23rd April.

142. BITTERN. *Botaurus stellaris.*

Seen on 13th and 14th December. One sent to me on 23rd February.

143. WHITE STORK. *Ciconia alba.*

Only one seen, on 2nd April, which had disappeared the next morning.

144. FLAMINGO. *Phœnicopterus roseus.*

Though I never met with this bird myself, many natives gave me an accurate description of it.

145. WATER-RAIL. *Rallus aquaticus.*

Common during the winter. Last noticed on 15th April. It is very likely that they remain to nest.

146. SPOTTED CRAKE. *Porzana maruetta.*

Passes about the middle of March.

147. MOOR-HEN. *Gallinula chloropus.*

Common during the winter; numbers remain to nest.

148. COMMON COOT. *Fulica atra.*

Some years Coots swarm on the lagoons on the east coast, but in 1884 I only counted sixteen, while in the same lagoon the year before they were in hundreds. A good many remain to breed.

149. —— GOOSE. *Anser,* sp. inc.

On both my visits I saw a flock of wild Geese on the east coast. None remained after the beginning of March. As far as I could make out with my glass, they were either Grey Lag-, Bean-, or Pink-footed Geese.

150. WILD DUCK. *Anas boscas.*

Plentiful during the winter. A good many remain to nest. Found young first out on 27th April.

151. GADWALL. *Chaulelasmus streperus.*

The only one seen I shot on flight on 11th February. No doubt it is plentiful, but it is impossible to distinguish the different species of Ducks which swarm at times on the lagoons.

152. SHOVELLER. *Spatula clypeata.*

Shot the first seen on 30th November; a few others seen during the winter. It was not until the end of February and beginning of March that they became very plentiful.

153. COMMON TEAL. *Querquedula crecca.*

Very common throughout the whole winter.

154. GARGANEY. *Querquedula circia.*

None noticed until 5th March, after that date they became common. Three shot on 22nd March were all males. Last noticed on April 18th.

155. PINTAIL. *Dafila acuta.*

Common on the lagoons in February and March. Several of those shot were young males, just changing their plumage.

156. WIGEON. *Mareca penelope.*

Plentiful throughout the winter until the beginning of March.

157. POCHARD. *Fuligula ferina.*

Very plentiful in February and in the beginning of March.

158. SCAUP. *Fuligula marila.*

Fairly common in winter. A female shot.

159. TUFTED DUCK. *Fuligula cristata.*

More plentiful on the rush-covered ponds than on the lagoons. A male shot.

160. GOLDENEYE. *Clangula glaucion.*

A female seen in December and February. The only examples noticed were males, in small parties of from four to eight. I observed also one of the Scoters, either *Œdemia nigra* or *Œ. fusca.*

161. WHITE-HEADED DUCK. *Erismatura leucocephala.*

The first of these curious Ducks I shot on 14th April; it was a male. On the 7th of May, in the same pond, I noticed two males and three females. The males were rushing after one another, every now and then stopping short beside the females, and hoisting their very peculiar tails straight in the air, spreading out every feather to its utmost, until the tails looked exactly like a hand with all the fingers spread out. They were still in the same place on 28th May, and, no doubt, had nests.

162. RED-BREASTED MERGANSER. *Mergus serrator.*

A few pairs seen on the west coast from November to the end of January.

163. GREAT CRESTED GREBE. *Podiceps cristatus.*

A few seen on the lagoons during the winter. One shot on 7th March was in good breeding-plumage.

164. EARED GREBE. *Podiceps nigricollis.*

Very common on the lagoons during the winter. Shot one of a pair in full breeding-plumage on 19th April. Saw another pair on 18th May.

165. LITTLE GREBE. *Tachybaptes fluviatilis.*

Not uncommon during the winter. Last noticed 24th April.

166. COMMON TERN. *Sterna fluviatilis.*

Fairly common in winter about the port of Ajaccio. A few noticed on the lagoons.

167. Sandwich Tern. *Sterna cantiaca.*

Not uncommon on the lagoons. A gentleman showed me two that he had shot near Bastia.

168. White-winged Black Tern. *Hydrochelidon leucoptera.*

Two seen on 28th May, during some very stormy weather, hawking some small dragon-flies in a rushy pond. Thinking they might nest I did not shoot them.

169. Black-headed Gull. *Larus ridibundus.*

Fairly common in the winter. I saw one on 30th April during a storm, in full breeding-plumage.

170. Common Gull. *Larus canus.*

Fairly common during the winter.

171. Audouin's Gull. *Larus audouini.*

I found a wounded bird on January 14th during a storm, and not knowing its value, did not keep it.

172. Yellow-legged Herring-Gull. *Larus cachinnans.*

Very common and resident. I found them nesting in numbers on the small islands round the coast. The eggs, two or three in number, vary much in colour, from deep brown to light green. On 2nd May the eggs were in all stages of incubation, a good many young having already left the nest.

173. Cinereous Shearwater. *Puffinus kuhli.*

Fairly plentiful on the small islands round the coast, where, I believe, it is only a summer resident. On 2nd of May I visited their nesting-quarters, and though some birds were under the rocks, there were no eggs, while many were flying close over the sea in long strings, every now and then their white breasts flashing in the sun. On the 2nd of June I made a more successful trip. My spaniel proved very useful, pointing the birds as they sat under the rocks; in every case a fresh white egg was the result. There seems to be an attempt at a nest—a few feathers from the bird's breast, a small quantity of sticks, and seaweed loosely arranged. These birds proved very disagreeable customers, biting our hands severely, which were often thrust under the rocks up to the shoulder. The entrance to the nest is difficult to find, often a rock in the short scrub, some distance from the water, is the chosen spot.

174. Yelkouan Shearwater. *Puffinus yelkouan.*

This species was fairly common on the small islands round the coast. On the 2nd of May, with the aid of a small dog, I found eight eggs; all were placed under piles of large rocks which had fallen from the cliff above. The eggs were nearly hatched, the young in some having broken the shells. While *Puffinus kuhli* likes to nest under single rocks some distance from the water, this species nests only a few feet from high-water mark. The only difference between this and the Manx Shearwater (*P. anglorum*) is that all the under tail-coverts are dusky brown, instead of pure white.

175. *Pelecanus,* sp. inc.

I was assured by several Corsican sportsmen that Pelicans sometimes visit the island in winter.

176. The Shag. *Phalacrocorax graculus.*

Fairly common and resident; nesting very early, in numbers, on several of the small islands visited. All the young were swimming about, full-grown, with their parents, on 2nd May.

V.—*On two Birds from Norfolk Island.*

By H. B. Tristram, D.D., F.R.S.

I have received from Mr. E. L. Layard specimens of the *Platycercus* from Norfolk Island, referred to by him ('Ibis,' 1881, p. 173) as deserving of recognition and separable from *P. pennanti* of the Australian continent. There is no difference in coloration, either in adult or immature plumage, between the birds from the continent and those from Norfolk Island; but the latter are decidedly smaller in their dimensions.

The measurements of the continental bird are:—long. tot. 16·0 poll., alæ 7·1, caud. 8·2, tarsi 0·6, dig. med. cum ungue 1·2. Of the Norfolk-Island specimens:—long. tot. 13·0 poll., alæ, 6·7, caud. 7·0, tarsi 0·5, dig. med. cum ungue 1·0.

Mr. Layard states that all his specimens agree in size. We may therefore fairly, I think, recognize the race from Norfolk Island, as Mr. Layard suggests, by the name *Platycercus pennanti,* var. *nobbsi,* in honour of the Rev. G. H. Nobbs, the devoted friend and guide of the Norfolk Islanders, the immigrants from Pitcairn's Island.

The *Halcyon* of Norfolk Island appears to me to be decidedly distinct. I have before me a large series of all the known species of the group. In dimensions it is rather larger than most of the other species, its wing measuring 3·9 in. as against 3·6 in *H. sancta, H. solomonis,* Ramsay, and *H. sacra,* 3·7 in *H. vagans* and *H. juliæ,* 4·1 in *H. chloris* and *H. occipitalis,* and 4·2 in *H. tristrami.* The frontal buffy-white spot does not, as in all the other species, except *H. solomonis,* extend further than the angle of the eye, so that the light eyebrow is entirely wanting. The under wing-coverts are light buff, as in *H. sancta,* to which in general coloration it approaches most closely, except that the green of the head and back is decidedly duller, though not nearly so dark as in *H. vagans.* But its most characteristic distinction is the bill, which differs markedly from that of all its congeners, both mandibles being extremely compressed, the culmen being slightly recurved and the gonys still more so. The width of the bill at the nostril is 0·3 inch, while the nearest approach to this is 0·4 in one specimen of *H. sancta,* all the other species ranging from 0·45 to 0·55 in width at this point. At 0·75 inch from the tip the width is 0·1 inch, all the other species ranging from 0·15 upwards. This description will, I think, justify the recognition of the bird, under the name which Mr. Layard proposes for it, as

HALCYON NORFOLKIENSIS, sp. nov.

Diagn. *Halcyoni sanctæ* similis, sed staturâ majore; supercilio nullo albido nec albescente; mandibulis arctissimè compressis et recurvatis.

Hab. Norfolk Island.

VI.—*On the Shedding of the Claws in the Ptarmigan and allied Birds**. By Leonhard Stejneger.

The fact of the Ptarmigans shedding their claws regularly every summer seems not to have been observed personally by any of the many excellent American ornithologists, and has therefore been comparatively little known to them. It may consequently not be without interest to demonstrate this process, as I have material at hand which shows the procedure very plainly.

The late Professor Sven Nilsson, the famous Swedish zoologist, was the first to discover this peculiarity in the Ptarmigans. His countryman, Professor W. Meves, afterwards confirmed his observations, and at the same time proved that this singular shedding of the claws also occurs in other birds of the family Tetraonidæ—as, for instance, in both sexes of *Bonasa bonasia, Urogallus urogallus,* and also, in the female at least, of *Lyrurus tetrix.*

As will be seen in the specimens of *Lagopus ridgwayi* (a new species which I was fortunate enough to detect on the Commander Islands, near Kamtschatka), shot in June and August, before shedding, the middle claw measures 18–20 millim., while in the specimen shot on the 23rd of August, and which has just thrown the old ones off, the length of the new claw is only 11 millim. More instructive still is a male shot on the same day, as it has the claws only partially shed. The old claws have become loosened from their base and are forced 2–3 millim. out, still covering the tips of the new ones, except on two toes, from which they have already dropped off. Hence it is obvious that the process is not a pathological one, in which the nail drops off as soon as it is perfectly separate from its bed and has ceased to receive nourishment through the blood-vessels.

Most conclusive, however, is a specimen of a quite different species, *Lagopus albus,* a specimen collected by Dr. Bean on Unga, one of the Shumagin Islands, Alaska. About this specimen Dr. Bean remarks, in his "Notes on Birds collected in Alasca," &c., in the Proc. U.S. Nat. Mus. 1882, p. 163, as follows:—"This specimen (shot on July 21st) corresponds very closely in most respects with No. 33,548, a female from Norway, collected July 2, 1862; the claws, however, are considerably shorter than in the Norway example and in all other specimens of *L. albus* in the Museum." Dr. Bean was kind enough to show me the specimen, when it was apparent that the extreme shortness of the claws was due to the fact that the bird had shed them just before it was shot, except on the right outer toe, on which the nail was so loose, however, that it dropped off, as I was a little too rough in handling it.

---

* Read before the Biological Society of Washington, April 5th, 1884, and reprinted from the 'American Naturalist,' vol. xviii. p. 774.

It will thus be seen that the shedding takes place in July or August, according to locality and other circumstances, at the time when the toes are most denuded, in fact, almost wholly naked, and the dark summer plumage is most complete. The claws grow very rapidly, however, and reach their full length long before the white winter plumage with the densely clothed toes is fully developed.

So far as known, this process is confined to the members of the family of Tetraonidæ mentioned above, when in the wild state; but Collett, of Christiania, has mentioned a case where a Quail (*Coturnix coturnix*) shed its claws in confinement; but this may have been due to some pathological process.

I am not aware that this peculiarity has been observed in any of the American Tetraonidæ except *Lagopus albus*; but there seems to be no reason why it should not occur, at least in species living under conditions similar to those in Northern Europe and North-eastern Asia. It is to be expected that we shall soon hear of instances from the Nearctic region also when attention has once been directed to it.

No histological investigation has been made to ascertain the causes and the development of this unusual process (at least I am not aware that any results of such an investigation have ever been published), and consequently nothing is definitely known.

As to the use which the birds derive from this extraordinary elongation of the claws, I shall only quote Professor Meves. He wrote in 1871 as follows:—"They (*Lagopus* and *Tetrao*) have, all through the winter, to struggle with the snow upon which they are forced to walk. The snow is often loose, and with a foot like that of the common fowl they would need much greater exertion of their strength in order to keep themselves on the surface. But the Ptarmigan, by having the underside of the toes thickly coated with feathers, which can be spread out, and by means of the long and straight claws, which may be compared with snow-shoes, are enabled to run easily over the snow; the usefulness and the necessity of the lengthening of the nails is self-evident. In the genus *Tetrao* (=*Urogallus*+*Lyrurus*+*Bonasa*) the lateral horny fringes of the toes render the same excellent service, and may fitly be regarded as a kind of snow-shoes. During the summer this whole outfit becomes superfluous, which may be the main cause of the periodical shedding." It may in this connexion be mentioned that the horny fringes in the *Tetraones* and the thick feathering of the toes in the *Lagopodes* also moult during the summer, at which time the toes of the latter are almost wholly denuded of feathers.

VII.—*On the Birds of Central India.*—Part I.

By Lieut.-Col. C. Swinhoe and Lieut. Henry Barnes.

No one appears to have collected systematically in Central India for any length of time. Jerdon passed through Central India on several occasions more than twenty years ago, but does not appear to have remained more than a few days at any of the stations.

When we, the writers of this paper, found ourselves quartered together at Mhow, we agreed that it would be advisable to commence collecting systematically from the beginning of our residence, and to submit the results of our collections and observations in a joint paper to the readers of 'The Ibis.'

We went to Mhow in September 1881. Swinhoe remained there for ten continuous months; Barnes for a shorter period; subsequently the latter went to Neemuch for some months, and has again returned to that station, where he is at present quartered. The result is that up to the present we have been able to record the occurrence of 255 species in this district, our collections and observations not having been confined to the immediate neighbourhood of Mhow and Neemuch, but including the surrounding districts, and particularly the lake countries round about. Moreover we hope shortly to be able to submit another paper showing the further results of collections and observations still being made by Barnes.

1. VULTUR MONACHUS, Linn.

♂. Length 43·5 inches, expanse 108, tail 14·75, tarsus 5, bill from gape 3·8.

The Cinereous Vulture is comparatively rare, and only occurs during the winter months. The one from which the above measurements were taken was shot close to Neemuch in March.

2. OTOGYPS CALVUS (Scop.).

Length 32 inches, expanse 86, wing 23, tail 10, tarsus 4·4, bill from gape 2·9.

The Indian King Vulture is far from uncommon; it appears to be solitary in its habits, rarely more than two being seen together. It is pugnacious in disposition, and will not allow others to approach while feeding. It is a permanent resident, and breeds during February and March. A nest found on 13th February contained a single fresh egg; it was built in a fork near the top of a high tree, and was a huge structure, composed of stout twigs, lined with finer twigs and green leaves. Others were found, but in no case was there more than one egg.

The eggs are glossless white, fine in texture, but very strong. The egg-lining is green. They measure 3·6 by 2·5.

3. GYPS FULVESCENS, Hume.

Length 44 inches, expanse 101, wing 28, tail 13, tarsus 4, bill from gape 3·1.

The Bay Vulture is not very common, and appears to be a permanent resident, but we did not succeed in finding a nest.

4. GYPS PALLESCENS, Hume.

Length 37 inches, expanse 88, wing 24, tail 10·5, tarsus 3·8, bill from gape 2·75.

The Long-billed Pale-brown Vulture is very common throughout the district. We could not ascertain any thing concerning its breeding-habits.

5. PSEUDOGYPS BENGALENSIS, Gm.

Length 35 inches, expanse 85, wing 23, tail 10, tarsus 3·7, bill from gape 2·75.

The White-backed is the commonest Vulture in Central India, and occurs in great numbers all over the district. It is a permanent resident, and breeds in colonies during December, January, and February. The nests are built in stout forks near the top of lofty trees, generally banyan (*Ficus bengalensis*), and are huge structures of a platform-shape, composed of stout twigs. These Vultures never lay more than one egg, which is white in colour, of a greenish tinge when fresh laid, but is generally much discoloured by the droppings of the parent bird; they are often spotted and blotched with various shades of reddish brown. The texture is moderately fine, and the shell is thick and strong; the egg-lining is a deep green. The eggs vary much in shape and size, some being moderately long ovals, while others are nearly spherical. They average 3·26 in length by 2·42 in breadth.

6. NEOPHRON GINGINIANUS (Lath.).

The White Scavenger Vulture is very common, more especially in the vicinity of towns and villages; it breeds during March and April, generally on trees, but occasionally on rocky cliffs, old buildings, and such-like places. It makes a large nest of twigs, lined with old rags or any rubbish it can procure—straggling if built on a cliff or building, rather more compact if on a tree. In the latter situation the nest is generally placed at the junction of a large limb with the trunk, very rarely in a fork. The eggs, two in number, are very handsome; they are somewhat chalky in texture, greyish white in colour, richly blotched and clouded with deep brownish red. They vary much in size, shape, and colours. The average is 2·6 in length by about 2 in breadth.

7. Falco peregrinator, Sund.

A pair of Shahin Falcons frequented the waterfalls near Mhow during the cold season of 1881. Jerdon, in his 'Birds of India,' vol. i. p. 27, mentions an eyrie at this very waterfall.

8. Falco juggur, J. E. Gr.

♂. Length 17·75 inches, expanse 39, wing 12·4, tail 7·4, tarsus 1·8. ♀. Length 18 inches, expanse 43·5, wing 13·75, tail 8·3, tarsus 1·8.

The Laggar Falcon is very common, and is a permanent resident, breeding during the first three months of the year, most of them laying in February. The nest is found in a variety of situations—a hole in the face of an old building or tree, a ledge on a rocky cliff, a fork in a lofty tree, and sometimes they appropriate an old crow's nest. The eggs, three or four in number, are oval in shape, of a fine but chalky texture, reddish or yellowish white in colour, so closely freckled and stippled with reddish brown as to leave little or none of the ground-colour visible. At such times the egg, unless looked at closely, appears to be of a uniform brick-red. Sometimes the colour is whiter, and the egg blotched, clouded, or capped with reddish brown, not, however, very distinct. They are sometimes very beautiful; measurements 2 by 1·55 in.

9. Falco chicquera, Daud.

Length 13 inches, expanse 27·2, wing 8·5, tail 6.

The Turumti is not uncommon, and occurs throughout the district; it is a permanent resident, and breeds during February and March. It frequents open country in the vicinity of cultivation. The nests are often found within village enclosures. They prefer rather high trees, such as tamarind or peepul, and in a fork near the top they construct rather a neat cup-shaped nest of twigs, lined with grass-roots. It would be rather a difficult nest to find, were it not for the fussy habit the bird has of darting out and attacking any bird that may happen to come near the tree. Jerdon says that they do not hesitate to attack the Tawny Eagle. The usual number of eggs is four, but we have sometimes found only three. They are rather longish ovals, somewhat chalky in texture, of a yellowish- or reddish-brown colour, closely stippled, blotched, mottled, and clouded with deeper shades of the same colour. They measure 1·6 by 1·25.

10. CERCHNEIS TINNUNCULUS (Linn.).

♂. Length 14 inches, expanse 29·75, wing 9·7, tail 7·5.

The Kestrel is a cold-weather visitant, and occurs in great numbers from the close of the monsoon until the commencement of the hot season. Its principal food appears to be lizards, locusts, *et hoc genus omne*, but it is occasionally seen chasing small birds.

11. ASTUR BADIUS (Gm.).

♂. Length 12·5 inches, wing 7·45, tail 5·2.

The Shikra is very common. It commences to breed early in March, but takes a very long time to complete its nest, apparently taking no end of trouble and pains, placing and replacing sticks and twigs a dozen times over, and the result is a nest that no respectable Crow would own. The eggs, three, sometimes four, in number, are oval in shape, in colour very pale bluish white, with very faint bluish spots. They measure 1·5 by 1·2.

12. ACCIPITER NISUS (Linn.).

The Common Sparrow-Hawk is rare; only one specimen was obtained, in April 1882.

13. ACCIPITER VIRGATUS, Reinw.

♂. Length 11·2 inches, wing 6·75, tail 5·1.

The Besra Sparrow-Hawk must be considered rare; two specimens were obtained at Mhow in October 1881. None others were procured or even seen.

14. AQUILA CLANGA, Pall.

♂. Length 25·5 inches, expanse 62·5, wing 19, tail 11.

The Spotted Eagle is not uncommon in the vicinity of the larger tanks. It is generally to be found in the early morning, sitting on a low tree. It is a permanent resident and breeds in March.

15. Aquila vindhiana, Gray.

♀. Length 27·5 inches, expanse 6·8, wing 19·5, tail 10·5.

The Tawny Eagle is very common; it is a permanent resident and breeds during the cold weather. A nest found in February was built on a lofty tree; it was a huge platform of sticks, lined with a few green leaves. The eggs had not then been laid; they are broad ovals, white in colour, sparingly spotted and blotched with reddish brown.

16. Circaetus gallicus (Gm.).

♂. Length 25·8 inches, expanse 70, tail 11·8, wing 20·75.

The Common Serpent-Eagle, or Jean le Blanc, is not uncommon, and is a permanent resident. The bird which furnished the above measurements was shot close to Neemuch in December.

17. Buteo ferox (Gm.).

The Long-legged Buzzard is not uncommon. Measurements, although carefully taken, have been mislaid.

18. Butastur teesa (Frankl.).

♂. Length 16·5 inches, expanse 36, wing 12·25, tail 6·5, tarsus 2·5.

The White-eyed Buzzard, or Teesa, is very common, seeming by preference to frequent gardens and well-watered and wooded districts, but is not altogether absent from the more arid tracts. It is a permanent resident, and breeds during March and April.

19. Circus macrurus (S. G. Gm.).

♂. Length 17·75 inches, expanse 41·3, wing 13·7, tail 9.

♀. Length 19·5 inches, expanse 45, wing 14·4, tail 10·75.

The Pale Harrier is very common, but only occurs during the cold season.

20. Circus pygargus (Linn.).

Montagu's Harrier also occurs during the cold season.

21. **Circus æruginosus** (Linn.).

♀. Length 25·9 inches, expanse 53·5, wing 17, tail 10.

The Marsh Harrier is very common, and is to be seen circling round every tank and jheel of any size, and along the course of every river in the district. It only occurs during the cold weather.

22. **Haliastur indus** (Bodd.).

The Maroon-backed or Brahminy Kite is by no means a common bird; it occurs, but sparingly, on and near the larger tanks throughout the district.

23. **Milvus govinda**, Sykes.

The Pariah Kite is very common.

24. **Pernis ptilonorhynchus** (Linn.).

♂. Length 23·5 inches, expanse 50, wing 16·4, tail 9·25.

♀. Length 26 inches, expanse 52, wing 18, tail 11·75.

The Crested Honey-Buzzard is very common in all well-wooded parts. It is a permanent resident.

25. **Elanus cæruleus** (Desf.).

♂. Length 11·9 inches, expanse 33·2, wing 11, tail 5·1.

The Black-winged Kite is not common. The specimen from which the above measurements were taken was shot at Mhow on the 25th September; two other specimens were obtained, one at the Depalpore Lake in December, and the other at the same place in January.

26. **Bubo bengalensis**, Frankl.

Length 22 inches, wing 16, tail 9.

The Rock Horned Owl is very common, frequenting the banks of rivers, especially if rocky and partially covered with brushwood. It breeds during February and March. The eggs (there is no nest) are placed on a ledge, sometimes in a large hole. They are three in number, and are perfect ovals, white in colour, with a creamy tinge. They are fine in texture, and measure 2·15 by 1·75.

27. **Bubo coromandus** (Lath.).

Length 23·75 inches, wing 17·8, tail 8·8.

The Dusky Horned Owl is another very common species, and breeds during December and January, making a rather large nest in lofty trees, composed of sticks and twigs. The eggs, two or three in number, vary much, both in size and shape. They are creamy white in colour, and measure 2·4 by 1·8.

28. Scops pennanti, Hodgs.

♂. Length 8 inches, expanse 19·5, wing 6, tail 2·75.

The Indian Scops Owl is very rare. The specimen whose measurements are given above was procured at Mhow, and was the only one obtained.

29. Carine brama (Temm.).

♀. Length 8·5 inches, expanse 19, wing 5·8, tail 2·6.

The Spotted Owlet is very common; every well or old tree is sure to be tenanted by a colony of these noisy birds. They breed during February and March, laying three or four roundish white eggs.

30. Hirundo rustica, Linn.

♂. Length 7·9 inches, wing 4·95, tail 4·7.

The Chimney-Swallow is common during the cold season, appearing about the middle of August and leaving towards the end of February.

31. Hirundo filifera, Steph.

This most beautiful bird, the Wire-tailed Swallow, is very common, and is a permanent resident. It breeds during March, April, and May, building a half saucer-shaped nest of mud under a bridge or on the sides of a well. The eggs, three in number, are white, spotted and blotched with brownish red and inky purple. They vary in shape, but are typically longish ovals.

32. Hirundo erythropygia, Sykes.

The Red-rumped Swallow is not uncommon, but is very locally distributed; one locality much frequented by them is the railway-cutting between Mhow and Kalakhund. They are permanent residents, and commence to breed early in June.

33. Cotile sinensis (J. E. Gr.).

The Indian Sand-Martin is very common, and is a permanent resident, breeding in January and February in holes excavated by the birds themselves in the sandy banks of the river. These holes are from 18 to 24 inches in depth. The eggs, four in number, are fine glossless white, oval in shape, and slightly pointed at one end.

34. Ptyonoprogne concolor (Sykes).

The Dusky Crag-Martin is common; it is a permanent resident, and breeds during February and March, and again in October and November.

35. Cypselus affinis, Gray.

The Indian Swift is one of the very commonest birds in the country. It breeds from January to August, a very favourite site being under the doorways of stables. The nests, composed of feathers, straws, &c., are agglutinated together with saliva. The eggs, three in number, are pure glossless white, elongated ovals in shape, measuring ·84 by ·56.

36. Dendrochelidon coronata (Tick.).

The Indian Crested Swift is not uncommon.

37. Caprimulgus asiaticus, Lath.

The Indian Nightjar is rather common, and is a permanent resident, breeding during May and June. The eggs, two in number, are oval in shape, salmon-coloured, with numerous clouds and blotches of clayey pink or brown. They measure 1 by ·75.

38. Merops viridis, Linn.

The Indian Bee-eater is very common, breeding during March and April. They nest in holes in the ground, generally in the face of a nullah or bank; these are excavated by the birds themselves, and are neatly cut. They are from two to three feet in depth. The eggs, from four to six in number, are glossy white and nearly spherical. They measure ·8 by ·7.

39. MEROPS PERSICUS, Pall.

The Egyptian Bee-eater at times is not uncommon, but is not a permanent resident. First observed on the 7th of October.

40. CORACIAS INDICA, Linn.

The Indian Roller is common, and is a permanent resident, breeding in April and May in holes, either in trees, old buildings, or banks. The eggs, four in number, are nearly spherical, glossy china-white in colour. They vary considerably both in size and shape, but average 1·25 by 1.

41. PELARGOPSIS GURIAL (Pears.).

♂. Length 15·75 inches, expanse 21·5, wing 6·1, tail 3·75, tarsus ·75, bill from gape 4·1, bill from front 3·4.

The Indian Stork-billed Kingfisher is a rare straggler, but has been procured both at the Depalpore Lake and at Neemuch.

42. HALCYON SMYRNENSIS (Gm.).

The White-breasted Kingfisher is very common, and, like most of the other Kingfishers, is a permanent resident where found. It breeds in holes in river-banks, sides of wells, and such-like suitable places. The eggs, five in number, are nearly spherical, pure white, and highly glossy. They are scarcely to be distinguished from those of *Coracias indica*, and measure 1·1 by 1.

43. ALCEDO BENGALENSIS, Gm.

The Indian Kingfisher is very common, and breeds during March and April. The eggs, five or six in number, are pure china-white, oval in shape. They are highly glossy, and average ·8 by ·7.

44. CERYLE RUDIS (Linn.).

The Pied Kingfisher is exceedingly common, and breeds during March and April. This bird is not in the habit of frequenting wells, like *Halcyon smyrnensis*, but where there is plenty of water there this bird is sure to occur. The eggs, four or five in number, are oval, pure china-white, and very glossy. They measure 1·1 by ·9.

45. Lophoceros birostris (Scop.): Elliot's Hornbills pl. xlviii.

Length 22 inches, expanse 32, wing 8, tail 10·5, tarsus 1·75, bill from gape 5.

The Jungle Grey Hornbill is common in all the well-wooded parts of the district.

46. Palæornis eupatria (Linn.).

Length 20·9 inches, wing 8, tail 11·45.

The Alexandrine Paroquet is common in suitable places. They make occasional visits in large flocks to gardens &c., returning in the evening to their homes on the hills. They are very noisy when feeding. Specimens were obtained at Depalpore, Mhow, and Neemuch.

47. Palæornis torquatus (Bodd.).

The Rose-ringed Paroquet is very common, breeding from the end of February to the commencement of April.

48. Palæornis purpureus (Müll.).

The Rose-headed Paroquet is common, and is a permanent resident.

49. Picus mahrattensis, Lath.

Length 7·6 inches, wing 4·43, tail 2·24, bill at front ·98.

The Yellow-fronted Woodpecker is not uncommon; it is a permanent resident.

50. Chrysocolaptes festivus (Bodd.).

The Black-naped Woodpecker is rare. A single specimen only was procured, at Manpore, in May 1882.

51. Brachypternus aurantius, Linn.

♂. Length 11·98 inches, expanse 18, wing 5·75, tail 3·97, bill at front 1·28.

The Golden-backed Woodpecker is common near Mhow, but less so at Neemuch. It is a permanent resident.

52. Iynx torquilla (Linn.).

Length 7·5 inches, wing 3·52, tail 2·49, tarsus ·6, bill at front ·61.

The Wryneck is very common during the cold weather.

53. Megalæma caniceps (Frankl.).

Length 10·5 inches, expanse 16, wing 5, tail 3·5, tarsus 1·1, bill at front 1·35.

The Green Barbet occurs in the denser jungles, but is nowhere common.

54. Xantholæma hæmacephala (P. L. S. Müll.).

Length 6·37 inches, expanse 10·75, wing 3·12, tail 1·37, tarsus ·75, bill at gape ·87, bill at front ·68.

The Coppersmith, or Crimson-breasted Barbet, is excessively common; it is a permanent resident, breeding from the latter end of January to about the middle of March. The eggs, three in number, are deposited in a hole made by the birds themselves in the dead branch of a tree; they are long and narrow, of a pure glossless white; they measure 1 by ·7.

55. Cuculus canorus, Linn.

The Cuckoo is fairly common on the hills near Mhow at the end of the rains.

56. Hierococcyx varius (Val.).

Length 13 inches, expanse 21·5, wing 8, tail 7, tarsus 1, bill from gape 1·1, bill at front ·7.

The Common Hawk-Cuckoo is very abundant, especially after the end of the rains.

57. Coccystes jacobinus (Bodd.).

♀. Length 12 inches, expanse 17·5, wing 5·75, tail 6·25, tarsus ·98, bill at gape 1·1, bill at front ·75.

The Pied Crested Cuckoo is very common during and after the rains. It breeds throughout the monsoon quite up to the end of October, depositing its eggs in the nests of *Chatarrhœa caudata.*

58. Eudynamis honorata (Linn.).

♂. Length 15·5 inches, expanse 23, wing 7·5, tail 7·5, tarsus 1·12, bill at front 1. ♀. Length 17·5 inches, wing 7·9, tail 8.

The Koel is a very common bird; some of them at least are permanent residents, as they are occasionally seen all the year round. About the commencement of April they become far more numerous. The female deposits two eggs in the nest of *Corvus splendens*. Generally one or two, occasionally as many as three, eggs are found in one nest, whether the product of a single bird it is impossible to say. The Koel, as a rule, does not destroy the eggs of the Crow when she leaves her own egg.

59. CENTROCOCCYX RUFIPENNIS (Ill.).

♂. Length 20 inches, expanse 21·5, wing 7·5, tail 10·8, tarsus 1·7, bill at front 1·3.

The Common Coucal, or, as it is commonly called, the Crow Pheasant, is very abundant, and is a permanent resident.

60. TACCOCUA LESCHENAULTI (Less.).

The Sirkeer is not very common, but has been obtained at Chitor, Neemuch, Mhow, and Manpore; it is therefore very generally distributed.

61. CINNYRIS ASIATICA (Lath.).

The Purple Honey-sucker is very common. It commences breeding about the end of February.

62. UPUPA EPOPS, Linn.

♀. Length 12·3 inches, expanse 18·5, wing 5·2, tail 4·4, tarsus ·7, bill from gape 2·42, bill at front 1·9.

The European Hoopoe is very common during the cold season, but does not remain to breed.

63. LANIUS LAHTORA, Sykes.

Length 9·6 inches, wing 4·3, tail 4·7, tarsus 1·25, bill at front ·6.

The Indian Grey Shrike is very common, and is a permanent resident; it is a very early breeder, nesting from February to the end of July. It frequents low thorny thickets, generally babool, in a fork of which it builds its nest. The eggs, four in number, are too well known to need description.

64. LANIUS ERYTHRONOTUS, Vig.

Length 10 inches, wing 3·6, tail 4·6.

The Rufous-backed Shrike is common, and is a permanent resident. It breeds during May and June in somewhat similar situations to its relative *L. lahtora*; its eggs, although much smaller, are very like those of the latter, both in shape and colour.

65. Lanius vittatus, Valenc.

♀. Length 7·2 inches, expanse 10, wing 3·25, tail 3·18, tarsus ·75, bill at gape ·87, bill at front ·5.

The Bay-backed Shrike is very plentiful, and is a permanent resident, breeding from April to June. Its eggs, although small, are of the true Shrike-like type.

66. Lanius cristatus, Valenc.

Length 7·8 inches, expanse 10·2, wing 3·36, tail 3·57, tarsus ·8, bill at gape ·75, bill at front ·43.

The Brown Shrike is very rare, a single specimen only having been obtained at Mhow on the 2nd October, 1881.

67. Tephrodornis pondicerianus (Gm.).

♂. Length 6·8 inches, expanse 10, wing 3·52, tail 2·7, tarsus ·75, bill at front ·61.

The Wood-Shrike is very common; it is a permanent resident. Examples were taken at Mhow and Manpore in March, May, October, and December.

68. Lalage sykesi (Strickl.).

The Black-headed Cuckoo-Shrike is rare, and only occurs in the cold season.

69. Graucalus macei, Less.

Length 11·5 inches, wing 6·4, tail 4·8.

The Large Cuckoo-Shrike is common in the cold season, but does not occur during the rains.

70. Pericrocotus peregrinus (Linn.).

Length 6·12 inches, expanse 7·46, wing 2·78, tail 3·4, tarsus ·5, bill at gape ·56, bill at front ·31.

The Small Minivet is very common; it is a permanent resident, and breeds during June and July. The nest is a very neat cup, built in the fork of a tree, and is rather difficult to find. The eggs are three in number.

71. Pericrocotus erythropygius, Jerd.

The White-bellied Minivet occurs sparingly throughout the district.

72. Buchanga atra (Herm.).

The King Crow is very common, and is, of course, a permanent resident.

73. Buchanga longicaudata (Jerd.).

A specimen procured at Mhow in October.

74. Buchanga cærulescens (Linn.).

The White-bellied King Crow is not common anywhere, but still occurs sparingly throughout the district.

75. Terpsiphone paradisi (Linn.).

The Paradise Flycatcher is very common, and is a permanent resident.

76. Rhipidura aureola (Vieill.).

♂. Length 7·5 inches, expanse 10, wing 3·3, tail 3·75, tarsus ·7.

The White-browed Fantail Flycatcher is very common; it is a permanent resident, and breeds from March to July. The nest is small, cup-shaped, neatly and compactly made, covered on the exterior with spider-webs. The eggs, three in number, are broad ovals in shape, buffy white in colour, with a nimbus or zone of buff and reddish-brown spots at the larger end.

77. Culicicapa ceylonensis (Sw.).

The Grey-headed Flycatcher is not uncommon, occurring in the cold weather only.

78. Stoparola melanops (Vig.).

The Verditer-Blue Flycatcher is not uncommon, but is very locally distributed. Mhow and Manpore are at present the only places whence we have obtained it.

79. Siphia tickelliæ, Blyth.

Tickell's Blue Redbreast must be considered rare. We obtained the male at Mhow and the female at Neemuch. Jerdon's 305 *C. banyumas* and his *C. tickelliæ* are respectively male and female of the same species. Blyth, however, subsequently discovered that the true *C. banyumas* was a different bird, and did not occur in India. He therefore named Jerdon's bird *C. jerdoni;* but as he had previously named the female *C. tickelliæ,* this latter name must stand, and *"jerdoni"* becomes a mere synonym.

80. Erythrosterna parva (Pall.).

The Robin Flycatcher is very common in the cold season.

81. Alseonax latirostris (Blyth).

The Southern Brown Flycatcher is rare; a single specimen was obtained at Manpore.

82. Monticola cyanus (Linn.).

Length 8·6 inches, expanse 13, wing 5, tail 3·1, tarsus 1, bill at gape 1·2, bill at front ·7.

The Blue Rock-Thrush is a very common winter visitant.

83. Monticola cinclorhynchus (Vig.).

Length 7·5 inches, expanse 11·2, wing 3·8, tail 2·75, tarsus ·8, bill at gape 1, bill at front ·58.

The Blue-headed Chat-Thrush is rather rare, and only occurs during the cold weather.

84. Pyctorhis sinensis (Gm.).

♂. Length 6·5 inches, expanse 7, wing 2·4, tail 3·1, tarsus ·9, bill at gape ·6, bill at front ·43.

The Yellow-eyed Babbler is common and is a permanent resident, breeding during June, July, and August.

85. Dumetia hyperythra (Frankl.).

The Rufous-bellied Warbler is perhaps more common than it appears to be, owing to its very retiring habits. At present we have obtained it at and in the vicinity of Mhow only, in March 1882 and December 1881.

86. Malacocercus terricolor (Hodgs.).

The Bengal Babbler is not uncommon; it is a permanent resident, and breeds from March to the end of July.

87. Argya malcolmi (Sykes).

The large Grey Babbler is, *par excellence,* the Babbler of

Central India; it is a permanent resident, and commences to breed as early as February. The nests are generally in a conspicuous position amongst the smaller branches of young babool trees.

88. CHATARRHŒA CAUDATA (Linn.).

The Striated Bush-Babbler is very common, breeding from March to July.

89. PYCNONOTUS HÆMORRHOUS (Gm.).

The Common Madras Bulbul is, as its name implies, one of the commonest birds in the district. It is a permanent resident, and breeds during April, May, and June.

90. ÆGITHINA TIPHIA (Linn.).

The White-winged Green Bulbul is common, occurring usually in pairs. It breeds about the commencement of May, and its nest is difficult to find, being so very small and placed at such a height as to appear to a casual observer a mere excrescence on a horizontal branch. This resemblance is further enhanced by the bird's habit of using spider-webs and other materials assimilating in colour to the bark as an exterior covering to the nest. The form of the species met with in this district has a great deal of black on the upper surface (=*Æ. zeylonica*).

91. ORIOLUS KUNDOO, Sykes.

Length 8·75 to 10 inches, expanse 16, wing 5·3 to 5·7, tail 3·4 to 3·8, tarsus ·7 to ·8, bill at gape 1·3, bill at front ·9 to 1·06.

The Indian Oriole occurs sparingly during the cold season, but is very common just before and during the rains. It breeds in July and August. The nest is bag-shaped, suspended between the prongs of a fork at the extreme end of a branch. After the eggs are laid it is an easy matter to discover the nest, as on the appearance of another bird (no matter how large) in the vicinity of the nest, it is at once violently attacked and driven away by the Orioles. Notwithstanding this the Crows frequently succeed in abstracting the eggs or callow young. It is amusing to watch the artful tricks of a pair of Crows who are intent on robbing an Oriole's nest. One of the pair makes an attack on the nest, and on being promptly resisted, flies off pursued to a distance by the parents. The other Crow then filches a portion of the contents of the nest. Upon the Orioles returning, flushed with their fancied victory, they discover their loss, and indulge in a frantic attack on the cunning robber, if he has not already made himself scarce; during the time they are engaged in this second and unequal contest, Crow No. 1 slyly returns and steals that which his accomplice was unable to take away. The pirates then adjourn to a neighbouring tree, loudly exulting. The simple Orioles, no wiser from experience, after a short season spent in mourning their loss, recommence preparations (frequently on the same tree) for rearing another brood. Shy as these birds naturally are on ordinary occasions, yet if their young are taken and conveyed even as far as a mile distant and placed in a cage anywhere within their reach, even though it be in an open verandah, they will so far overcome their natural timidity as to supply their young with food until long after they have arrived at maturity. The young birds are very difficult to keep in confinement, they usually die suddenly, or else refuse food, pine, and die when no longer attended to by their parents.

92. ORIOLUS INDICUS, Jerd.

Swinhoe observed the Black-naped Oriole at Manpore in June 1882. The bird was seen quite distinctly within a few feet of it, but unfortunately no means were at hand for obtaining the specimen.

[To be continued.]

VIII.—*The Ornithology of St. Kilda.*

By CHARLES DIXON.

(Plate III.)

PERHAPS no part of the British Islands is more interesting to the ornithologist than St. Kilda. On this bleak and sublimely grand ocean-rock some of the rarest and the most interesting birds in our fauna find a congenial home; here alone they may be studied at their breeding-places. Now that it is known that St. Kilda possesses a Wren peculiar to its rocky shores the interest attaching to it will be increased, and the fact may serve to draw the attention of British ornithologists to the little bird's secluded home. It is very strange that no complete list of the birds of this remote island has ever been compiled by any modern ornithologist, and stranger still is the indifference with which the place and its bird-treasures have been treated by British naturalists during the past forty years. Perhaps the difficulty of reaching St. Kilda and the hardships, imaginary or real, which must of necessity be endured, if the sojourn on its by no means hospitable shores is for any length of time, are the chief reasons for its having been so much neglected. Strange it seems that while British ornithologists have journeyed far and wide over all parts of the known world in the interests of their favourite science, St. Kilda, the remotest part of the United Kingdom, has been disregarded, and a bird has existed there which, until the summer of last year, was absolutely unknown to science.

We find, perhaps, the earliest known record of the birds of St. Kilda from the pen of "M. Martin, Gent.," written in the year 1698, in his 'Voyage to St. Kilda;' but the lonely island had attracted the attention of several previous travellers, including Sir Robert Sibbald. Martin gave a by no means bad account of the birds of these famous islands, specially noting the Great Auk, which, as every naturalist knows, once used St. Kilda as a breeding-station. He enumerates about twenty species, amongst them being a Wren, which for nearly two hundred years has remained undetermined! In addition to Martin, the following is a brief list of the principal writers on the ornithology of the islands. A full account of the birds of St. Kilda was given by the Rev. J. L. Buchanan, in his 'Travels in the Western Hebrides between the years 1782–1790.' In 1811 MacDonald published his 'General View of the Agriculture of the Hebrides,' which contained a list of the birds of St. Kilda. In 1832 Mr. Atkinson published (Trans. Nat. Hist. Soc. Newcastle-upon-Tyne) an account of his visit to St. Kilda, made during the previous year. In 1840 John Macgillivray, a son of the great naturalist, William Macgillivray, who, however, refers to him as "a friend of mine" in his article on the Puffin, and gives the date of his visit to St. Kilda as 1839! (Hist. Brit. B. v. p. 369), after a most perilous voyage, reached St. Kilda (staying there four days), and published an account of its bird-life in the 'Edinburgh New Philosophical Journal' (1842, p. 47); whilst in 1842 James Wilson published an account of its ornithology in his 'Voyage round the Coasts of Scotland and the Isles.' In 1848 Sir William Milner published in the 'Zoologist' a very complete account of the birds of this remote corner of the British Islands; and in 1869 the pages of 'The Ibis' were enriched with a graphic account of St. Kilda bird-life from the pen of Captain Elwes. In 1876 Sands (who spent seven weeks in the islands in 1875 and eight months in 1876–77) published his 'Out of the World, or Life in St. Kilda,' containing an account of its ornithology; whilst in the following year Seton issued his 'St. Kilda, past and present,' containing a chapter devoted to the birds. As, however, Seton's experience of St. Kilda only extended over a few hours, during the stay of a pleasure-steamer, his information was compiled from contemporary writers. In the summer of 1883 Mr. Barrington paid a visit to these islands; but no account of his journey seems to have been published; and his researches were more of a botanical than an ornithological nature.

St. Kilda has always possessed a charm for me; to explore its rocky shores has been a long-cherished hope; but the only way to do it with any degree of thoroughness was to spend a week or so there. Through the kindness of my friend Mr. J. T. Mackenzie, of Dunvegan, in Skye, the present factor of St. Kilda, I was enabled last summer to visit the island in his smack, and to stay there for nearly a fortnight. Mr. Mackenzie's vessel pays two visits to St. Kilda every year (in spring and autumn), and he himself generally accompanies her on her spring voyage. This vessel conveys meal, tea, sugar, salt, tobacco, &c. to the St.-Kildans, and brings back oil, feathers, cloth, salt-fish, tallow, and a few hides, the natural products of the place.

We left Dunvegan in the 'Robert Hadden,' a tight little smack of about eighty tons, at noon on Tuesday the 3rd of June. The wind was light, scarcely sufficient to carry us out of Loch Follart into the Minch, which we crossed during the evening, arriving at 1.30 A.M. on Wednesday in the Sound of Harris, where we awaited daylight to navigate these dangerous straits. All day Wednesday we were becalmed in the Sound; and I took the opportunity of exploring some of the small islets, in company with Mr. John Mackenzie, jun., and Mr. Campbell, a gentleman going out to St. Kilda as schoolmaster. Several of the small islands in the Sound are frequented by otters, and seals are very common. The Oystercatcher, the Merganser, and the Eider Duck were abundant, and the sea was studded with Guillemots, Razorbills, and Puffins, whilst every now and then a string of Cormorants or Shags flew swiftly over the glassy water, and the gaggle of Wild Geese sounded faintly from Harris and Uist. We finally cast anchor off Obb to take in a supply of fresh water, and got under weigh again at four in the afternoon. As soon as we got clear of the island of Pabbay, we caught a stiff breeze, and were speedily bowling along W.N.W., with all sails set for St. Kilda, some fifty miles ahead. The sea was rough, and our little craft was tossed about considerably by the waves. Just as dusk was falling, old Neil, one of the crew, sighted the island of Borreay from the rigging; and the excitement of "land ahead"—far-famed St. Kilda at last—was enough to make us forget the discomforts of the protracted voyage and the by no means gentle treatment of the wind and waves. About twenty miles from St. Kilda we saw several Manx Shearwaters flying in the gloom round the ship, a few Auks floated like corks on the billows, and one or two solitary Fulmars floated Owl-like above us and then disappeared again in the twilight.

As we approached Borreay the island became more distinct, coming out clearly against the western horizon, whilst beyond, again, looming like a huge dark cloud, St. Kilda proper rose weird-like from the sea. We passed the large inaccessible rock Levenish, which stands sentinel-like at the mouth of East or Village Bay, into which we sailed in the darkness, and came to anchor, as it seemed, right under the frowning hills, at half-past one A.M. on Thursday. Inside the bay the sea was almost as rough as outside; and here we were left to our fate by the islanders—left to toss and roll all night almost within stone's throw of the shore. About eight o'clock the following morning a large boat put off to the smack, manned by half a dozen St.-Kildans, to fetch us ashore. Glad, indeed, were they to welcome us, for they had seen no strangers and had had no communication with the outside world for nine months! The landing was rather a difficult undertaking, owing to the treacherous swell; but once on shore, almost all the population came down to meet the strangers, and universal hand-shaking was the order of the day. The faithful old pastor, the Rev. John Mackay, was first and foremost in his welcome, insisting on our partaking of his hospitality, and anxiously listening meanwhile to the doings of the busy outside world.

Viewed from the sea, St. Kilda looks far more barren and dreary than it really is, and the same remarks apply in an ornithological sense, for few birds are in sight. As seen from Village Bay, St. Kilda presents a grand, majestic, and novel appearance. The deeply indented bay is in the foreground; on our left is the precipitous island of Doon, looking for the most part bare and rocky, like some dismantled fortress or ruined cathedral, its jagged peaks rising in many places sheer from the water. Doon forms the southern horn of the bay, and is only separated from St. Kilda by a very narrow strait, almost fordable at low water. Next to Doon on the mainland rises the hill Mullach-scaill, or Bald Top; then comes mighty Connacher overlooking all, the morning mist settling on his hoary head, twelve hundred feet above the sea; whilst on the right rises Mullach-oshavall, or the Top of Oswald, forming the northern horn of this remarkably picturesque bay. At the extreme western extremity of St. Kilda is the smaller island of Soay, separated by a narrow strait, in which stand three lofty stacks of rock (Stack Biorrach, or the pointed stack, the most difficult cliff to climb in the islands, Stack Soay, and Stack Doonaah, or the bad stack). On two of these stacks sea-birds breed in great numbers. Soay rises over a thousand feet from the sea, and affords a pasturage for a large number of sheep, as well as a congenial home for myriads of sea-fowl, particularly the Manx Shearwater, which literally swarms, many parts of the island being undermined with the burrows of these singular birds. The Stormy Petrels' nurseries are also here. About four miles north of St. Kilda stands the island of Borreay, with its attendant rocks of Stack-an-Armin and Stack Lii, the latter being the grand headquarters of the Gannets, which not only swarm on its flat sloping summit, but on all the ledges, nooks, and crannies of its lofty sides. Borreay rises over a thousand feet above sea-level, and its mighty cliffs swarm with birds, whilst sheep graze on the summit and the grassy ledges. St. Kilda is the only island of the group which is inhabited by man; and at the time of my visit in June 1884 its population numbered seventy-eight.

Upon landing, my trusty henchman, Sandy Campbell of Dunvegan, introduced me to Donald M'Queen, the best cragsman in the island, the best fowler, and the best guide to the birds of St. Kilda. He knows them all, and supplied me with much information respecting their habits. Unfortunately he only speaks Gaelic, and my conversations had to be carried on chiefly by Sandy's aid, or with the assistance of Mr. J. Mackenzie and Mr. Campbell. As soon as I landed on this ornithological paradise, signs of birds met me at every step. The ground near the houses was strewn with birds' wings, feathers, and bones; the houses smelt strongly of Fulmars; and in a dozen different ways I was informed that I was amongst a nation of fowlers. The houses of the St.-Kildans are ranged in a long crescent, about four hundred yards from the shore. Behind and before them are the patches of cultivated ground, chiefly sown with grain and potatoes, and enclosed with a rough wall, which keeps out the sheep and cows. Nearer the shore stands the store, the church, and the manse. St. Kilda is plentifully supplied with the best of water, both from springs and from the rivulets which rise on Connacher. The steep sides of this hill are seared in several places by small ravines, worn out by the streams which dash down in rainy weather. Climbing the hill in a south-westerly direction, and passing over the shoulder between Mullach-scaill and Connacher, a wild and novel scene presents itself, far more picturesque than the portion of St. Kilda we have left behind us. Glen Mór, the "Amazon's Glen," or "the Glen," as it is known in St. Kilda, stretches out at our feet, sloping gently down to the distant Atlantic at West Bay. The hills on either side of this romantic glen fall almost sheer down in precipices to the sea, and on them the Fulmars, great numbers of Guillemots, Razorbills, and Gulls rear their young, whilst here and there, in a few favourite spots, the Shearwaters burrow in the rich soft soil. At the extremity of the glen the cliffs are low and the shore is very rocky; but a landing can sometimes be made here, when the usual place in East Bay is inaccessible. The Glen contains the finest pasturage in St. Kilda, and it is there most of the cows are grazed. Not a tree nor a shrub relieves the monotony of the bare hillsides or sheltered valleys of St. Kilda; but grass grows luxuriantly, making it literally an "emerald isle;" and primroses, sorrel, and many other plants thrive on the cliffs and sloping banks. The wild hillsides are thickly studded with rough hovels, or "cleats," made of boulders and roofed with turf, in which the St.-Kildans dry their "turfs" and grass, and in which the sheep take refuge during storms. I found the male population exceedingly civil, obliging, merry fellows, anxious to assist me in every way they could; whilst the ladies were not wanting in hospitality to the "Sassenach," many of them bringing eggs and birds, as soon as it became known that I had come to their islands specially to collect and examine such objects.

When I landed scarcely a sea-bird was to be seen, save a few Puffins and Gulls in the bay; the great bird-nurseries are away behind the frowning hills, where the cliffs fall almost sheer down to the water, and on the adjoining islands and "stacks." One of the first birds to arrest my attention on landing was the Hooded Crow (all apparently thorough-breds), which perched on the roofs of the cottages with as little concern as the Sparrow in a crowded city; and next to this the Starling and the Wheatear were the most common. I had not been ashore long before the Wren attracted my notice, and I saw at once that it was not the typical British form, and set it down provisionally as *Troglodytes borealis*. When I reached St. Kilda the egg-harvest was nearly over; out of the hundreds of eggs we took from the rocks very few were fresh, and most were so hard-set as to render blowing them impossible. The St.-Kildans eat vast numbers of eggs, especially those of the Fulmar and the various species of Auks. The cliffs of St. Kilda are divided equally amongst the inhabitants, and a man seldom or never poaches on his neighbour's preserves. Each year the rocks are portioned out anew, the Saxon Mòd, or council, assembling for the purpose. The adjacent islands of Doon, Soay, Borreay, and the several "stacks" are common property, and are hunted at intervals by a party despatched in one of the boats for the purpose, the produce of the expedition being shared equally. The St.-Kildans are adepts at catching birds; but as for their feats amongst the rocks, I saw nothing extraordinary, and the climbers at Flamborough are every bit as daring. In fact, high as the cliffs at St. Kilda are, they are comparatively easy to climb, being for the most part broken into ledges, and few of them fall sheer down to the water. Even the mighty cliff of Connacher (twelve hundred feet high) does not fall sheer, but much of it is broken up into ledges and grassy slopes, in which the Fulmars love to nest. The men were very anxious that I should not disturb their Fulmars. No gamekeeper watched his preserves more jealously; and every time I went near the cliffs where they were breeding, if I chanced to have a gun with me, several men or boys were sure to follow and warn me off the sacred spot.

As I was anxious to obtain a few examples of the Fulmar, I got Donald to accompany me one evening to the cliffs on the shoulder between Mullach-oshavall and Connacher, for the purpose of seeing his method of catching birds. Every St.-Kildan almost constantly wears a coil of rope slung round his body, as well as a clasp-knife, hung with a string round his neck. After arming himself with a rod, about ten feet in length, at the end of which, fastened on to a hazel-twig, was a horsehair noose, stiffened, like a carriage-whip, with Gannets' quills, Donald started with me for the rocks. In spite of the gale that was blowing from the north-west, he fearlessly descended the cliffs, creeping stealthily towards the Fulmars that were sitting unconsciously on their nests, and then carefully passing the rod towards one of them, he slipped the fatal noose over its head and drew the fluttering captive towards him. Its companions seemed little concerned at its fate; and he was able to catch as many as we wanted, with the smallest possible trouble. All the sea-birds are caught in the same manner. As soon as they are taken, the fowler usually breaks their necks and hangs them in his belt, or ties them by the neck in bundles. Most of the Puffins are caught in horsehair nooses, which are fixed on cords and set in various parts of the cliffs and banks which they frequent, whilst great numbers are taken from their holes, either by the fowler himself or by his dog, which is trained for the purpose.

When climbing the more difficult parts of the cliffs the St.-Kildans go in parties; sometimes two men go together, more often three or four—one descending the cliffs, the others managing the ropes above and assisting their companion to explore the most likely parts of the rocks. One of the ropes is generally fastened round the climber's waist and paid out by the men at the top as it is required, whilst the other rope is suspended over the cliff by a stake, and is used to relieve the body-rope as much as possible. As is usual in nearly all cliff-climbing, the greatest danger arises from the loose pieces of rock that are liable to fall on the fowler. Accidents are not of very frequent occurrence, and are usually the result of gross carelessness. Donald pointed out the place where his father lost his footing and was dashed from the giddy height into the boiling sea below. I climbed over the exact spot, which seemed to me one of the most unlikely places in the cliffs for such an accident to happen. The great ambition of a St.-Kildan is to excel as a cragsman, to become a successful fowler; in fact until a man has performed certain feats of daring in the cliffs he never wins a wife! The man who fails to scale the beetling Stack Biorrach is said never to win a St.-Kildan maiden's heart. Even the ladies of St. Kilda are expert fowlers, devoting their attention chiefly to the Puffins and to the management of the snares. Sea-birds form the staple food of the people of this remote island; the Puffin, the Fulmar, and the Gannet are the favourites. These birds are caught in enormous numbers and salted down for future use, the feathers and oil being exported. Great numbers of Puffins are simply plucked, split open, and dried, being hung in strings across the ceilings of the cottages and taken down as required. A mummified Puffin is one of the dainties of St. Kilda! Sands records that upwards of eighty-nine thousand Puffins alone were caught by the St.-Kildans in 1876.

Much has been said concerning the difficulty of landing and the anchorage at St. Kilda. The only place at which a landing is attempted is on the rocky shore below the manse, and boats require the most skilful management, even in the finest weather, for there is always more or less swell and surf. During the whole time of my stay there was a considerable swell incessantly breaking on the shore, the spray often dashing thirty feet or more up the cliffs, especially on Doon. In fact, so bad was the swell that I was prevented from landing on any of the adjoining islands and "stacks," with the exception of Doon, which a few hours' comparative lull afforded me an opportunity of visiting. The heavy seas that from time to time break over St. Kilda are almost past credence; in some winters the spray dashes over cliffs several hundred feet high; the wild Atlantic waves, with their two-thousand mile roll, threatening to overwhelm these rocky isles that impede their progress. During fine weather the anchorage of St. Kilda is one of the finest on our coasts, but should bad weather threaten, the mariner must make all possible haste out of the treacherous bay, or do as Mr. Mackenzie does, make all snug, drop another anchor, and abandon his vessel to her fate, to ride out the storm or go to the bottom!

I left St. Kilda by the steamship 'Dunara Castle,' which paid the island a visit, remaining several hours whilst her passengers inspected the wonders of the place. She afterwards made a circuit of the entire group, steaming round the islands, and firing a gun at intervals to scare the birds from the cliffs. The wild grandeur and picturesqueness of St. Kilda and its neighbouring isles can only be seen to advantage from the water; then the endless variety of form and colour which their impressive headlands and lofty cliffs assume may be viewed in all their lonely sublimity, the scene being constantly vignetted in the countless myriads of sea-birds that literally darken the air. I left the 'Dunara Castle' at Loch Tarbert, and came on to Dunvegan in the mail-packet, which had a long tedious voyage across the Minch, and finally landed me in Skye at three A.M. on Tuesday the 17th of June. I have appended the St.-Kilda names of most of the birds in the following list, as they will in many cases be found to differ from the Gaelic names in use amongst the Highlands.

HALIAETUS ALBICILLA.

The White-tailed Eagle can only be regarded as an accidental visitor to St. Kilda. It would probably breed there regularly were it left unmolested; but as soon as the birds have made a nest, the natives draw lots as to who must undertake the perilous task of descending the cliff and setting fire to the structure. The St.-Kildans are afraid that the Eagles would destroy their sheep and lambs.

FALCO GYRFALCO (?).

Mr. Mackinnon, presumably a resident of St. Kilda, informed J. Macgillivray that the Gyr Falcon bred on the main island of the group, and that when he visited a nest the old birds attacked him violently (Macgillivray, Brit. B. iii. App.

p. 738). There can be little doubt that Macgillivray's informant made a mistake, and that the species in question was the Peregrine.

FALCO PEREGRINUS.

The Peregrine breeds sparingly on the cliffs, two or three pairs only tenanting the most inaccessible portions of the islands. The lofty pinnacles of Doon are the bird's favourite haunt.

FALCO TINNUNCULUS.

The Kestrel occasionally visits St. Kilda, but I could find no evidence of its ever breeding there.

ALUCO FLAMMEUS (?).

Donald M'Queen told me that he remembered an Owl caught here many years ago, which, from his description, I took to be the Barn-Owl.

TURDUS MUSICUS.

I include the Song-Thrush as a bird of St. Kilda on the authority of Sir William Milner. It probably occurs on migration.

TURDUS ILIACUS. "Smeorach."

The Redwing is seen on St. Kilda during its annual migration, in May and September, in flocks.

MERULA MERULA. "Lon-dutha."

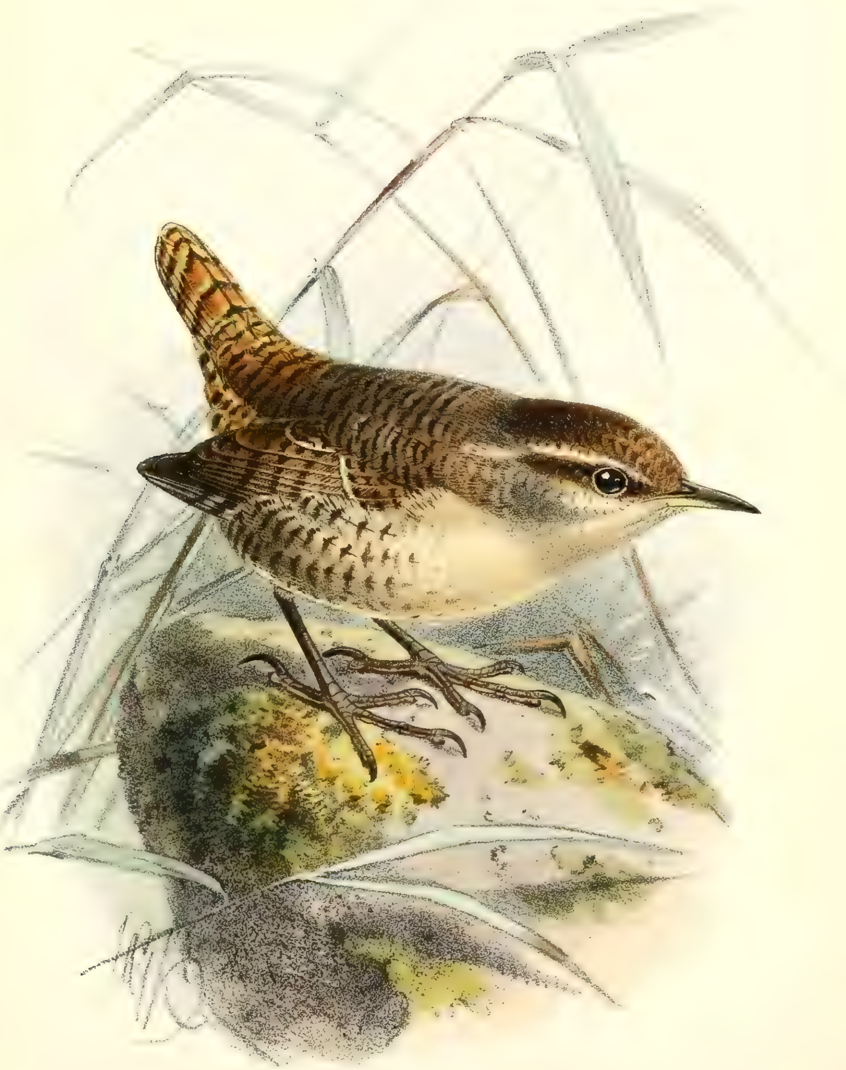
The Blackbird visits St. Kilda on spring and autumn migration, but never remains to breed.

SAXICOLA ŒNANTHE. "Clacharan."

The Wheatear is very common on St. Kilda, and is one of the most conspicuous land-birds as it flies to and fro over the stony hillsides. I did not observe it on Doon.

TROGLODYTES HIRTENSIS, Seebohm. (Plate III.)

The most interesting result of my trip to St. Kilda was the determination of its Wren, called "Dhra-in-doun" by the natives. Although this little Wren was known to Martin nearly two hundred years ago, neither he nor any subsequent naturalist had the least idea that the bird was different



J. G. Keulemans lith.

Hanhart imp

TROGLODYTES HIRTENSIS.

from the Wren inhabiting the rest of the United Kingdom. This little stranger was introduced to the notice of ornithologists by Mr. Seebohm ('Zoologist,' 1884, p. 333). He writes:—"The St.-Kilda Wren most nearly resembles *Troglodytes parvulus pallescens* from the Western Aleutian Islands, but is much more distinctly barred on the back and head, and almost free from any traces of spots on the throat and breast. In general colour it is quite as pale and slightly greyer than examples of *Troglodytes parvulus pallidus* from Algeria and Turkestan. The bill resembles that of *Troglodytes parvulus borealis* from the Faroë Islands. The eye-stripe is as distinct as in typical examples from Europe, a character which is least developed in *T. parvulus nipalensis* and *T. parvulus fumigatus*."

I had not been on St. Kilda long before the little bird arrested my attention, as it flew from rock to rock, or glided in and out of the crevices of the walls. It differs very little in its habits from its congener; only, instead of hopping restlessly and incessantly about brushwood, it has to content itself with boulders and walls. It was in full song, and its voice seemed to me louder and more powerful than that of the Common Wren. I often saw it within a few feet of the sea, hopping about the rocks on the beach; and a pair had made their nest in the wall below the manse, not thirty yards from the waves. I also saw it frequently on the tops of the hills and in many parts of the cliffs. It was especially common on Doon, and its cheery little song sounded from all parts of the rocks.

As there are no bushes nor trees on St. Kilda (except those the microscopic eye of a botanist might discover), the Wren takes to the luxuriant grass, sorrel, and other herbage growing on the cliffs, and picks its insect food from them. It also catches spiders and the larvæ of different insects in the nooks and crannies which it is incessantly exploring. It is a pert active little bird, by no means shy; and I used to watch a pair that were feeding their young in a nest not six yards from our door. Its breeding-season must commence early in May, for the young were three parts grown by the beginning of June. It makes its nest either in one of the numerous "cleats," or in a crevice of a wall, or under an overhanging bank. The nest is exactly similar to that of the Common Wren, and abundantly lined with feathers. I had not the good fortune to obtain any of its eggs, but I presume that they resemble those of its near congener.

CORVUS CORAX. "Fiach."

The Raven is a rare resident in St. Kilda, but the natives occasionally rob its nest.

CORVUS CORNIX. "Fannag."

The Hooded Crow is very common in St. Kilda, and, when not engaged in family duties on the cliffs, it lives almost exclusively near the cottages, perching on their roofs, ready to pounce down upon any garbage that may be thrown out. The Crows are incessantly mobbing the Gulls and fighting with each other. All those I examined were thoroughbreds.

CORVUS FRUGILEGUS. "Rockeish."

Donald M'Queen told me that the Rook is occasionally seen in St. Kilda during winter.

STURNUS VULGARIS. "Druit."

The Starling is fairly common on St. Kilda and breeds in the "cleats." I found a nest containing young birds in a hole in the ground under a large mass of rock. At the time of my visit many Starlings were preparing for a second brood.

PASSER DOMESTICUS.

The House-Sparrow is included in the lists of St.-Kilda birds by the early writers; but I am almost certain that it does not regularly frequent the island. It may possibly occur accidentally.

PASSER MONTANUS.

I saw a pair of Tree-Sparrows on the 9th of June and shot one of them. They breed in the holes of the rough stone walls that enclose the fields.

FRINGILLA FLAVIROSTRIS.

The Twite is not uncommon on St. Kilda, and there can scarcely be a doubt that it breeds there. In June I saw it in small flocks, mostly young birds, feeding on the seed of weeds in the grass-fields.

EMBERIZA MILIARIA.

Gray states that the Common Bunting extends as far west as St. Kilda, but I never saw any traces of it. Macgillivray says that it is common.

EMBERIZA CITRINELLA.

I saw a solitary Yellow Bunting on the 15th of June in the field near the manse.

HIRUNDO RUSTICA.

Mr. Mackenzie informs me that he saw numbers of Swallows on St. Kilda in 1883, but he never observed them there before. I never saw the Swallow during my stay. It never breeds on St. Kilda.

MOTACILLA YARRELLII. "Brachd-an-t'sil."

The Pied Wagtail is seen on St. Kilda during spring and autumn migration. Gray seems to imply that this bird breeds there, but the natives say that it never remains over the summer.

ANTHUS PRATENSIS.

The Meadow-Pipit occurs sparingly on St. Kilda, where it breeds and is said to be a resident.

ANTHUS OBSCURUS.

The Rock-Pipit occurs sparingly round the coasts of St. Kilda and Doon. I saw several pairs on the cliffs mingling with the Puffins.

ALAUDA ARVENSIS.

There can be little doubt that the Sky-Lark visits St. Kilda. Macaulay mentions the "Lark" in his list, and Macgillivray states that it is common.

CORACIAS GARRULA.

Gray, writing in 1871, states that a Roller appears to have been observed on St. Kilda "about twenty-five years ago."

CUCULUS CANORUS. "Cuach."

The Cuckoo is heard occasionally on St. Kilda, and is regarded by the natives with superstitious awe. They say it portends a calamity—the death of Macleod, the proprietor of the island!

COLUMBA PALUMBUS.

I saw a pair of Ring-Doves on the stony sides of Mullach-oshavall within a few yards of the sea. They were absurdly tame, allowing Sandy and myself to approach them within a few paces. None of the natives ever knew this bird to visit the island before.

COLUMBA LIVIA.

There can be little doubt that the Rock-Dove breeds on St. Kilda, but it is certainly not a common bird. I never saw more than a pair; but it may be more numerous on Soay, Borreay, and the adjacent "stacks."

TETRAO MUTUS.

Wilson was informed by the minister that he once saw a Ptarmigan on St. Kilda after strong easterly winds.

ARDEA CINEREA. "Gorridhgr-idheach."

The Heron occasionally visits St. Kilda, but rarely survives long. The natives generally pick them up dead—starved to death, for the water is too deep and the shore too precipitous to admit of successful fishing. The St.-Kildan sometimes stalks and snares it as it stands upon the rocks.

CREX PRATENSIS.

Two hundred years ago Martin included the Corn-Crake in his list of St.-Kilda land-birds, and from that day to this it has occasionally visited these lonely Atlantic isles. I neither saw nor heard this species, and do not think it breeds there. It cannot be very common, for I could not learn that the natives have any Gaelic equivalent for it.

HÆMATOPUS OSTRALEGUS. "Treallachan."

Martin includes the Oystercatcher in his list of the birds of St. Kilda, and says that it arrives in the beginning of May.

I observed perhaps half a dozen pairs on St. Kilda, and Mr. John Mackenzie found a nest containing three hard-set eggs on the 12th of June. There are few suitable nesting-places for this bird on the islands, and the nest that was obtained was on some rough pebble-strewn ground at the foot of the cliff below Mullach-scaill.

CHARADRIUS PLUVIALIS.

The minister informed Macgillivray that the Golden Plover occasionally visited St. Kilda.

STREPSILAS INTERPRES.

Gray seems to be under the impression that the Turnstone breeds on St. Kilda, as well as on some other of the remotest Hebrides. I never saw the Turnstone, and I cannot but think that the small parties that frequent the western coast-line of Scotland during the summer are immature non-breeding birds, although I am aware that this species breeds as far south as the southern shores of the Baltic.

NUMENIUS ARQUATA. "Guilbnaach."

I saw one or two pairs of Curlews feeding on the rocks and small patch of sand in East Bay. I think that they must have had nests either on Doon or in Glen Mòr, but I could not find them. Captain Elwes says that although this bird is found during the greater part of the year on Islay, it does not breed there.

NUMENIUS PHÆOPUS.

I saw a pair of Whimbrels on the rocks below Mullach-scaill; they were very wild and noisy.

TOTANUS HYPOLEUCUS.

I include the Common Sandpiper in the list of St.-Kilda birds on the authority of Sir William Milner ('Zoologist,' 1848, p. 2061), who saw this species on the island on the 14th of June.

TRINGA ALPINA.

Although Gray states positively that the Dunlin breeds on St. Kilda, I fancy there must be some mistake. I never saw a trace of this species, and certainly on St. Kilda and Doon there are no suitable nesting-places for it, whatever there may be on Soay or Borreay. It is doubtless an occasional visitor. Macgillivray saw several pairs.

SCOLOPAX GALLINAGO. "Niiskin."

The Common Snipe is said to be a resident on St. Kilda, but none of the natives have ever seen its eggs. I carefully explored all the little marshy places in the island, but without success.

? SCOLOPAX RUSTICULA. "Ootacac."

A description of a bird with a long bill, which Donald M'Queen gave me, I could only refer to the Woodcock. He said that it was a *resident* on St. Kilda, but so shy that the natives rarely get a glimpse of it. The Woodcock probably passes these islands on migration. He described it as skulking closely under the shelter of large stones or heaps of turf, especially near marshy places.

LARUS MARINUS. "Farspach."

The Great Black-backed Gull is common in St. Kilda, and breeds in more or less abundance on Doon, and I think on Soay. It is much disliked by the natives, for it robs the Fulmar's nests incessantly and destroys large numbers of Guillemot's eggs. A bird of this species tore to pieces a Puffin which I had shot, as it lay on the sea, in spite of several shots I had at it with a rifle. Its note is a harsh *cac cac cac*.

LARUS FUSCUS.

The Lesser Black-backed Gull breeds in considerable numbers on St. Kilda and the adjoining islands and "stacks."

LARUS ARGENTATUS.

The Herring-Gull also breeds on St. Kilda, Doon, and Borreay, and probably on Soay and the "stacks." It is not very common, and I did not obtain any of its eggs.

LARUS CANUS.

The Common Gull is included in the list of St.-Kilda birds by Sir William Milner, who states that it breeds on Borreay. I did not observe this species. Macgillivray says that it is the least common of the Gulls.

LARUS TRIDACTYLUS. "Ruideag."

The Kittiwake is certainly the commonest Gull in St. Kilda, and the steepest part of the cliffs is white with them. Great numbers breed on Doon and Soay, and it also nests in smaller quantities amongst the Fulmars at the back of Connacher. It breeds on the several "stacks," and I heard it crying from the cliffs of Borreay. It is said to arrive in the first half of April and to leave in August.

I never observed a Tern of any species at St. Kilda, nor do I find any recorded from the islands. The island of Borreay, which Gray speaks about as a breeding-place of the Arctic Tern (*Sterna arctica*), is an island of the Outer Hebrides in the Sound of Harris, and must not be confused with Borreay, the island laying four miles N.W. of St. Kilda.

STERCORARIUS CREPIDATUS.

Sandy Campbell informed me that an example of Richardson's Skua was observed on St. Kilda in the summer of 1883.

STERCORARIUS CATARRHACTES.

The Great Skua visits St. Kilda at irregular intervals.

MERGUS SERRATOR. "Sheiltach."

The Red-breasted Merganser is a rare visitor to St. Kilda. Sandy shot an example in 1883. During my stay Mr. John Mackenzie shot one in East Bay. No others were seen, but one of the natives brought for my inspection a "Saw-bill," stuffed by himself in a very rude style, and which he treasures as a great curiosity.

SOMATERIA MOLLISSIMA. "Gochach."

The Eider-Duck is not very common, but certainly breeds on Doon, where I took a nest on the 10th of June. I have seen as many as half a dozen pairs swimming together in East Bay. The natives never collect the down, a sure sign that the bird is scarce here.

SOMATERIA SPECTABILIS.

Ornithologists will read with pleasure that the King Eider frequents St. Kilda. I first became aware of this interesting fact when trying to stalk the Common Eiders in the bay. For two hours I lay concealed behind a huge boulder, watching the little party of Ducks that were swimming just outside the breakers. Two of the pairs were King Eiders. In spite of all my efforts, both on this and subsequent occasions, I failed to secure an example. They were not more than seventy yards away from me several times, so that I had every opportunity of observing them; and on more than one occasion I carefully scanned them through a powerful glass. They mingled freely with the Common Eiders and did not differ in any perceptible degree in their habits. It was a pretty sight to watch these rare and charming birds sporting in the heaving waves, the males and females swimming side by side. As the mighty rollers broke upon the shore the birds dived through the bright green wave just before it turned over. They were busy feeding on the small animals which were disturbed by the breaking waves. They floated light as corks on the heaving sea, now high up exposed to view, then deep down in the trough of the waves. As soon as they caught a glimpse of me they quickly swam further from shore. Every day they might be observed in one particular part of the bay; and I have not the slightest doubt that they were nesting on the precipitous island of Doon. Of course the natives did not distinguish them from the Common Eider; and they take but little interest in them, for they tell me the male Eider is the only bird of St. Kilda that they are unable to snare.

ANSER FERUS.

I noticed five birds, which I took to be Grey-lag Geese, flying past St. Kilda on the second evening of my stay. They were flying almost due west, right out to sea, and were probably a small flock that had wandered from the Long Island, where the bird is very common.

CYGNUS —— ?

Swans occasionally visit St. Kilda, but no one appears to have determined to what species they belong.

COLYMBUS GLACIALIS. "Bunna bhuachel."

Sandy informed me that a pair of Great Northern Divers were blown into St. Kilda by the terrible gale in the autumn of 1882. One of the examples I believe is still preserved somewhere in Skye.

URIA TROILE. "Lamhaidh."

St. Kilda is the grand head-quarters of the Alcidæ; the far-famed Pinnacles and Flamborough cliffs sink into insignificance when compared with the breeding-stations on these lonely isles and stacks. The natives gather the eggs literally by boatloads, and those of the Common Guillemot are the most abundant. A Guillemot I shot had been feeding on herring-fry. Iris dark brown; bill almost black. I did not observe a single example of the Ringed form.

URIA BRUENNICHI.

Sir William Milner includes Brünnich's Guillemot as a St.-Kilda bird, and states that Graham obtained an egg on Soay on the 15th of June. No subsequent naturalist has met with this species in the islands, but the bird may probably breed there. After all, who knows any thing about the Guillemots of Soay?—far more unlikely birds than Brünnich's Guillemot may breed there for ought any British ornithologist knows to the contrary! Unfortunately the heavy swell prevented me from landing on that wild rugged island.

URIA GRYLLE. "Gearadh-breacha."

The Black Guillemot is not uncommon, but certainly the least numerous of the Auks. One or two might be constantly seen close in shore at the foot of the rugged cliffs. Donald got me a few eggs of this species. It breeds on Doon as well as on St. Kilda.

MERGULUS ALLE.

The Little Auk occurs sparingly at St. Kilda in winter. Donald recognized at a glance a figure of this species I had with me.

ALCA TORDA. "Falcadh."

The Razorbill is almost as common as the Guillemot, and breeds on all the islands and stacks. They were seen sitting in rows along the ledges of the cliffs. Its eggs are more difficult to procure than those of the Guillemot, and for ten Guillemot's eggs in the possession of the natives I only saw one Razorbill's. I took an egg of this bird from a deep hole in the ground where the Petrels were breeding, and Donald told me that he takes an egg from this particular hole every year. The Razorbills which I shot had the irides hazel; legs and feet smoky black; bill black, streaked with white; inside of the mouth brilliant yellow.

ALCA IMPENNIS. "An erbhoil."

St. Kilda was perhaps the only part of the United Kingdom where the Great Auk ever bred. Martin was probably the first naturalist to give us any information from personal observation of this bird. He states that it is "the stateliest as well as the largest of all the Fowls here" and that "he flyeth not at all, lays his egg [!] upon the bare rock, which if taken away, he lays no more for that year." The Great Auk, so far as we have any record, does not seem to have bred there regularly. The last specimen that was taken at St. Kilda appears to have been in 1822.

I am convinced that much of the information which has been gathered at St. Kilda respecting the Great Auk is very unreliable. I think that the Great Northern Diver has been its proxy more than once; and that the bird which the St.-Kildans stoned to death (as I was informed) forty years ago on Stack-an-Armin, thinking that it was an evil spirit, was nothing more than *Colymbus glacialis*. I must, however, state that the old man who assisted in this ornithological sacrilege recognized the plate of the Great Auk which I had brought with me. None of the young men know any thing about the species, not even by name. The Great Auk's only link with the present day is the grey-haired weather-beaten old St.-Kildan with whom I conversed respecting its visit so long ago.

FRATERCULA ARCTICA. "Bougir."

This comical little bird is one of the commonest at St. Kilda. It occurs there in thousands and tens of thousands. Every little bit of suitable cliff contains its colony of Puffins, and the birds may be seen flying round and round above the highest cliffs, or dashing from them in rapid flight to the water, whilst the sea in many parts is almost black with them. When walking under the cliffs I was often startled by a shower of loose pebbles and earth, dislodged by the busy Puffins burrowing far above. The Puffin, notwithstanding his small wings, flies well and gracefully, and often hovers perfectly motionless in the air, with his bright orange-red legs outstretched to guide him in his course. Puffins often fly about in the air like Starlings for a quarter of an hour or more. They dive well, but not so frequently as the Guillemot. The Puffin arrives at St. Kilda on the 1st of May, almost as regularly as clockwork, and leaves in autumn. Doon is the paradise of Puffins; the whole island is undermined with them, and the air is darkened with birds as they fly up from the grassy banks or perching-places on the cliffs, or from their nest-holes. During the whole time I was on Doon the Puffins were flying round us in tens of thousands, and quite a rushing noise was made with their wings.

PHALACROCORAX CARBO.

The Cormorant occurs very sparingly at St. Kilda.

PHALACROCORAX GRACULUS. "Sgarbh."

The Shag is commoner at St. Kilda than the preceding species, and breeds in the several caverns round the rock-bound coasts.

SULA BASSANA. "Souler."

The Gannet breeds in tens of thousands on the island of Borreay and the adjacent "stacks." Stack Lii is the great breeding-station, and from a distance looks as if it was covered with a gigantic tablecloth. The masses of birds that crowd upon its sloping summit make this rock a very conspicuous object, and it may be distinctly seen from the Long Island, forty miles away, like a large ship under full sail bending to windward. When the birds are disturbed the air is darkened, although but a small percentage takes wing, and the rocks are not visibly decreased in whiteness. Very few Gannets are to be seen round St. Kilda. I observed on one or two occasions several birds fishing in the bay, but they never stayed long. The Gannet is highly prized by the St.-Kildans for its feathers, its oil, and its flesh. The great bulk of these birds come here in May, a few pioneers a little earlier, and they leave as soon as the young (which are called "Gugha") are strong upon the wing in autumn. Many of the St.-Kilda Gannets obtain their food in the Minch, fifty miles away.

PROCELLARIA GLACIALIS. "Ful-a-mair."

The Fulmar is *par excellence* the bird of St. Kilda. It is a resident in the islands, but Donald told me that they leave the rocks *en masse* about the middle of October and return about the middle of November. During this time not a Fulmar is to be seen except a few stragglers out at sea in the neighbourhood of the islands. The great haunt of this bird is in the cliffs behind Connacher, and those between that mountain and Mulloch-oshavall, but numbers of Fulmars breed in all suitable situations throughout the group of islands. I shall never forget the grandeur of the scene when I first made the acquaintance of the Fulmar at home. Just before I reached one of the shoulders of Connacher I saw a few Fulmars sailing in graceful flight above the cliffs, then darting downwards again into space. When I reached the summit the scene was grand. Thousands and tens of thousands of Fulmars were flying silently about in all directions, but never by any chance soaring over the land. They confined their flight to passing backwards and forwards past the face of the cliffs, or darting downwards to the waves eight hundred feet below. No bird flies more gracefully than the Fulmar. It floats in the air with scarcely any effort, and passes to and fro for minutes together without beating its wings. It was very tame and fluttered in the air a few feet from the edge of the cliff where I was standing, and every now and then hovered like a Kestrel, or turned round as if on a pivot. Some parts of the cliffs, where the soil is loose and covered with turf, are almost white with sitting Fulmars. The Fulmar begins to lay about the middle of May and the young are able to fly early in August. The bird rarely if ever burrows deep enough in the ground to conceal itself whilst incubating, and in the majority of instances only makes a hole large enough to conceal half its body. In some cases it is content with laying its egg under some projecting tuft or even on the bare and exposed ledge of a cliff, in a similar place to that so often selected by the Guillemot. The nests are very slight and in some instances are dispensed with altogether. I noticed that a little dry grass was the only material the Fulmar used in making its nest.

The Fulmars we caught ejected a large quantity of amber-coloured oil. Most of this issued from the mouth, but a small portion came through the tubular nostrils, especially when the bird was dying. Donald told me that the Fulmar dives, and that it often takes the baits from the long lines. When disturbed by the report of a gun, the Fulmars filled the air like snowflakes, and the mighty hordes of Puffins looked like a huge swarm of bees darkening the air as far as we could see. The natives do not collect so many eggs of this bird as I should have expected, but their grand Fulmar harvest is when the young are almost ready for flight. The natives now and then take small nuts from the crops of the Fulmar. I obtained one of these nuts; and Sir William Milner procured several. He supposed them to be Brazilian, and they are doubtless brought north by the Gulf-stream and picked up by the birds from the water.

There can be no doubt that several races of Fulmar inhabit St. Kilda. The natives assert that there are two kinds, a light and a dark one; but the latter is rare, although they sometimes snare it from its eggs. These light and dark races of the Fulmar may be again divided into a large and small form of each respectively. Several of the eggs I obtained unquestionably belong to this small form of Fulmar, but whether of the light or dark races I am unable to say, as I did not take them myself. There are two dominant forms of Fulmar, an Atlantic and a Pacific one. Curiously enough the latter appears to go through the same variations as its Atlantic ally, viz. a light and dark form, each with a large and small representative. The light and dark Pacific birds are said to breed in separate colonies on Copper Island. All the Pacific forms are said to have light-coloured bills, but in the light form of the Atlantic Fulmar the nasal tubes are dark, and the dark form of the latter bird has the entire bill dark except the nail. The Pacific dark form also appears to be constantly darker than its Atlantic representative; and in both oceans the dark form is most western, and the light form most eastern in its distribution. For the above information on the variations of the Fulmar I am indebted to Mr. Seebohm, to whom it was furnished by Professor Ridgway.

In spite of what Capt. Feilden, Prof. Malmgren, and other naturalists say to the contrary, there can be no doubt that the dark birds are not in the immature stage of plumage. Malmgren says that he saw intermediate examples between the light and dark forms; but this, I think, points to the fact that all these forms of Fulmar interbreed, as well-behaved subspecies ought to do.

PUFFINUS ANGLORUM. "Scrapire."

The Manx Shearwater is far commoner on St. Kilda than is generally supposed, and probably breeds on all the islands. It certainly does so on Doon, St. Kilda, and Soay. It is one of the earliest birds to arrive at the islands in spring, coming early in February, and it is amongst the last to leave in autumn. This Shearwater is so common on Soay that as many as four hundred have been caught in a single night; and their cries are described by the St.-Kildans as deafening. The Shearwater is nocturnal in its habits and at night-time becomes very garrulous. Donald imitated its note to a nicety, and it may be expressed on paper as *kitty-coo-roo, kitty-coo-roo.* This note is uttered when the bird is flying and when sitting on its nest. Guided by the note, the men are able to find the nests with little difficulty, so that they always prefer to go in search of this species at night. I obtained eggs of this bird in the cliffs on the south-west part of St. Kilda. Much to the disgust of Donald I allowed one of the Shearwaters to escape in order to observe its flight and actions in the daytime. The St.-Kildans cannot understand a man who having once caught a bird allows it to escape again; and in low whispers one asked the other in Gaelic if the "Sassenach" were not a madman! The birds I dissected had been feeding on sorrel, and the stomach contained a dark oily substance.

THALASSIDROMA PELAGICA. "Assilag."

I did not get a glimpse of the Stormy Petrel, but it is very common, especially on Soay, where I was unable to land. Sir William Milner obtained its eggs on Borreay on the 15th of June; and it also breeds on Doon, where its eggs were taken last year. Its date of arrival and departure is said by the natives to be similar to that of the Shearwater.

THALASSIDROMA LEUCORRHOA. "Assilag."

The natives do not distinguish by name the two species of small Petrels that breed on St. Kilda, although Donald seemed well aware of the difference between them. The first British examples of the Fork-tailed Petrel were obtained on St. Kilda in the summer of 1818 by Bullock, a year after it was first described by Vieillot; and at that time the species was so rare that only three other examples were known. I cannot find that Bullock ever published any account of his discovery, but his specimen is described in his sale-catalogue as "an undescribed Petrel, with a forked tail, taken at St. Kilda in 1818." It is pretty common on Doon, and Sir William Milner also obtained its eggs on Borreay and Soay. It does not, so far as I could learn, breed on St. Kilda, and is said by the natives to be commonest on Soay. They say it is one of the earliest birds to arrive in spring, and one of the latest to depart in autumn. I obtained a fine series of birds and fresh eggs of this species on Doon on the 10th of June. The place where the Fork-tailed Petrel breeds is on that portion of the island nearest to St. Kilda, and at the summit. The nests were very close together and we found half a dozen in a patch of grassy land perhaps ten yards square. Only one egg is laid, at the end of a burrow precisely similar to that made by the Puffin, and the nest is merely a little half-dried grass. We never found more than one bird in the hole, and both sexes appear to take turns in incubating the egg. The bird when caught emitted a small quantity of oil precisely similar to that vomited by the Fulmar. I took eleven nests of this interesting little bird, but in two holes there was no egg, although we caught the parent. One hole contained no nest whatever and the egg lay on the bare ground. The holes vary considerably in depth, and are made in the soft soil, where it is very easy to unearth them; but whether they are made by the Petrels or are disused Puffin's burrows, I am unable to say. Sometimes the hole has two entrances, and one end must be stopped to prevent the bird escaping. Those holes which were inhabited by Petrels generally had a little dry grass at the entrance. The Fork-tailed Petrel is almost exclusively nocturnal in its habits, and keeps close in its hole during the day. The birds which I dissected had been feeding on similar substances to those found in the Fulmar and the Shearwater. Irides dark hazel; legs, feet, claws, and bill black.

Of the sixty-seven species enumerated in the preceding list twenty-seven may be regarded as breeding regularly on the islands, four only breed occasionally, and two or three may breed there but have hitherto escaped noticed (Curlew, Snipe, Brünnich's Guillemot). The remainder are only accidental visitors or pass regularly on spring and autumn migration. I have not the least doubt that the list of occasional visitors would be doubled if we had competent observers stationed at St. Kilda during migration-time. I hope to be able to furnish some additions to the present list, for Mr. Campbell, the schoolmaster, has promised to keep a look-out for any migrants that may chance to call at these lonely islands. There is evidently a considerable migration over them; but the St.-Kildan, as might naturally be expected, takes no interest in birds with the exception of those on which he so largely, nay almost solely, depends for a livelihood.

IX.—*Notices of recent Ornithological Publications.*

1. *Baird, Brewer, and Ridgway on the Water-Birds of North America.*

[Memoirs of the Museum of Comparative Zoology at Harvard College. Vol. XII. The Water-Birds of North America. By S. F. Baird, T. M. Brewer, and R. Ridgway. Vol. I. 4to. Boston: 1884.]

Ornithologists will welcome the first instalment of this long-delayed work, and will hope that the final and completing volume may speedily follow*. The 'Water-Birds of North America' forms alike the second part of the 'Land-Birds of California,' published by the State Geological Survey of California in 1870, and of the well-known 'History of North American Birds' of Messrs. Baird, Brewer, and Ridgway, published in 1875. With its numerous illustrations, and excellent print and paper, every one will be pleased. Nor will any one, in our opinion, be less satisfied with the contents, although some of the changes from the ordinary nomenclature, proposed for adoption, look a little awkward at first. Do many of our readers know what *Vanellus capella* is, or *Charadrius apricarius*?

The present volume contains an account of the Herodiones, Limicolæ, Alectorides, Phœnicopteri, and the first portion of the Anseres, leaving the remaining "Swimmers" for the final volume. It is wisely admitted that this arrangement is "not natural," but "adopted for the convenience of the student." Does it, however, profit a student to learn a confessedly unnatural system?

[* It has since been issued.—Edd.]

2. *Barboza du Bocage on Birds from Angola.*

[Observações acerca de algumas aves d'Angola. Por J. V. Barboza du Bocage. Jorn. Sc. Lisboa, no. xxxiv. p. 65 (1883).]

Critical notes on some of the less known species of Angolan birds, of which the Lisbon Museum has recently received specimens. As regards the singular colouring of the sexes in *Pionias rueppelli*, the author is disposed to concur with the views recently put forward by Sclater (P. Z. S. 1882, p. 557).

3. *Barboza du Bocage on West-African Birds.*

[Aves das possessões portugezas da Africa occidental. Por J. V. Barboza du Bocage. Vigesima quinta lista. Jorn. Sc. Lisboa, xxxiv. p. 81 (1883).]

Prof. Barboza du Bocage's twenty-fifth article gives an account of Sr. Anchieta's last collection from Caconda, and of one from the Rio Cuce, to which that celebrated explorer has lately made a short excursion. Fifty-one species are recorded, amongst which is *Neocichla gutturalis.*

4. *Barboza du Bocage on* Cinnyris erikssoni.

[Sur l'identité de *Cinnyris erikssoni*, Trimen, et *Nectarinia ludovicensis*, Bocage. Par J. V. Barboza du Bocage. Jorn. Sc. Lisboa, xxxiv. p. 105 (1883).]

It is shown that *Cinnyris erikssoni*, Trimen, 1883, was previously described in 1868, by Prof. Barboza du Bocage, as *Nectarinia ludovicensis.*

5. *Belding on the Birds of Guaymas.*

[List of Birds found at Guaymas, Sonora, in December 1882 and April 1883. By L. Belding. Pr. U.S. Nat. Mus. 1883, p. 343.]

Enumerates 46 species, of which 35 are also found in Lower California, on the opposite side of the Gulf—five others being represented there by closely allied "species or races," while six are unrepresented in Lower California.

6. *Belding on the Birds of Lower California.*

[Second Catalogue of a collection made near the southern extremity of

Lower California. By L. Belding. Edited by R. Ridgway. Pr. U.S. Nat. Mus. 1883, p. 344.]

Mr. Belding arrived at La Paz in December 1882, and remained about three months. In the hitherto unvisited Victoria Mountains, where a height of 5000 feet was attained, examples of 41 species were procured. Upon reaching the pines, "the long sought for Cape Robin (*Merula confinis*), the beautiful new Snow-bird (*Junco bairdi*), and other interesting species were met with." *Micrathene whitneyi* was less common than in the Cactus-region, but was heard several times. Fifteen species were also added to the list of the lowland birds from the vicinity of La Paz and southwards, raising the total number now recognized by Mr. Belding in Lower California to 177.

7. *Buller on rare New-Zealand Birds.*

[On some rare species of New-Zealand Birds. By Walter L. Buller. Trans. and Proc. New Zealand Inst. vol. xvi. p. 308.]

Mr. Buller gives interesting notes on *Sceloglaux albifacies*, *Hylochelidon nigricans*, and *Anthochæra carunculata*, the last-named bird being new to New Zealand. He resuscitates his *Creadion cinereus* as distinct from *C. carunculatus*, and *Platycercus alpinus* as distinct from *P. novæ-zealandiæ*. Other species are mentioned.

8. *Cory on the Birds of San Domingo.*

[The Birds of Haiti and San Domingo. By Charles B. Cory. Boston: 1884. Part II.]

In his second part Mr. Cory makes good progress with the birds of San Domingo, finishing the Passeres and commencing the Picariæ. It is curious that two species of Tody should occur in San Domingo; but that seems to be the case, and, moreover, both species occur in the same district. *Todus angustirostris*, according to Mr. Cory, is quite distinct from *Todus subulatus* (sive *dominicensis*), with which many authors have united it. Figures are given in the present number of *Phœnicophilus dominicensis*, *Calyptophilus frugivorus*, *Euphonia musica*, *Loximitris dominicensis*, *Icterus dominicensis*, *Temnurus roseigaster*, and *Picumnus lawrencii*.

9. *Coues's new Key to North-American Birds.*

[Key to North-American Birds. Containing a concise account of every species of living and fossil bird at present known from the Continent north of the Mexican and United States Boundary, inclusive of Greenland. Second edition, revised to date, and entirely rewritten: with which are incorporated General Ornithology, an outline of the Structure and Classification of Birds; and Field Ornithology, a Manual of collecting, preparing, and preserving Birds. By Elliott Coues, M.A. Royal 8vo. London and Boston: 1884.]

The first edition of Dr. Coues's well-known 'Key to North-American Birds' was issued in 1872. The twelve years that have since elapsed have, as we all know, been a period of great activity to the American ornithologists, and have so greatly increased our knowledge of the Nearctic avifauna, that it was quite necessary that the 'Key' should be revised. The revised, improved, and augmented 'Key' forms the second and third part of the present edition. To the main body of the work thus constituted, Dr. Coues has prefixed a reprint of his 'Field Ornithology,' which originally appeared in 1874 as a separate work, and is, we believe, one of the best manuals of instruction for the field-collector, as regards the obtaining, preparing, and preserving specimens, ever put together. He has likewise added, as Part IV., a systematic Synopsis of the Fossil Birds of North America—in the revision of which he has had the advantage of the assistance of Prof. O. C. Marsh, the greatest living authority on this subject.

It is, however, to Part II. of the present volume that we must specially direct the reader's attention. In this Part there is condensed into some 180 pages a more complete account of the structure and classification of birds, brought up to the present standard of our knowledge, than any other with which we are acquainted. After defining and describing what birds in general are, and stating the principles and practices used in classification, special chapters are devoted to their external structure, "osteology, neurology, angeiology, pneumatology, splanchnology, and oology." So much information that cannot be got at elsewhere is brought together in this comprehensive treatise, that it ought to be in the hands of every ornithologist, whether he is a special student of the American avifauna or not. It is, in fact, our deliberate opinion that Coues's new 'Key' is, as one of the veteran ornithologists of the continent has tersely put it, in a private letter, "one of the best and most useful bird-books ever written;" and we commend it to our readers accordingly.

10. *Cowan on the Birds of Madagascar.*

[Notes on the Natural History of Madagascar. By Rev. W. Deans Cowan. Pr. Roy. Phys. Soc. Edinburgh, vol. vii. p. 133.]

To his very interesting article on the fauna of Madagascar Mr. Cowan adds a nominal list of the mammals and birds, and tables showing their distribution in three "well-marked geographical districts" of the south-central part of the island. The list contains the names of 115 birds. From Mr. Cowan's general remarks on the birds, we extract the following passages:—

"In travelling through the forest of Madagascar, nothing strikes one more than what appears to be the absence of bird-life. Now and again one hears the cry of the *Centropus tolou*, mostly on the outskirts of the forest. One passes the brilliant *Coua cærulea*, making its way quietly through the forest; but that is the most that is generally seen or heard of the birds in the great forest. True, if we were to penetrate into the denser forest we might come upon the *Atelornis pittoides* or *A. crossleyi*, the *Euryceros prevosti*, the velvety *Philepitta jala*, or such birds as love the recesses and lonely shades of these silent woods. Suddenly, and often unexpectedly, the trees overhead become filled with crowds of birds, chattering in many a different note—that is what may be called a 'drive' of birds. Hundreds, sometimes thousands of them have congregated for feeding-purposes, and are now passing through the forest, clearing the insects from trees and shrubs. Conspicuous amongst them for size and noise is the *Dicrurus forficatus*, *Tylas eduardi*, and *Campephaga cana*; of the smaller birds there is the *Zosterops madagascariensis*, the two *Bernieriæ*, the *Leptopterus viridis*, and the chattering *Newtonia*, with many others. It is by following such drives that the natives are able to obtain so many birds with their blow-pipes. The birds that frequent the more open parts of the country are *Pratincola sybilla*, *Cisticola madagascariensis*, *Eurystomus madagascariensis*, and *Hypsipetes ourovang*. The peculiar little *Dromæocercus* wanders quietly amongst the grass, beside the streams in the glades of the forest, and is never seen perching, except in some natural-history plates! The *Leptosomus discolor*, a rather remarkable bird, delights in the outlying forest, where his peculiar cry of *dre-dres* is frequently heard.

"The *Cuculus rochii* begins his spring song in October, or early part of November, and farms out his young there, as in all other countries. His note changes considerably just before he takes his departure, whether to the low countries or across the sea, I cannot say. The egg is very unlike that of any other Cuckoo, and varies to some extent in the marking. The nests it most frequents are those of the *Pratincola sybilla* and the *Cisticola madagascariensis*, although its egg is often found in the nests of *Cossypha sharpei* and *Copsychus pica*. The nesting-season in Madagascar extends from November to February or March, the common *Foudia* being amongst the last of the nest-builders."

11. *De Verteuil's 'Trinidad.'* (Second edition.)

[Trinidad: its geography, natural resources, administration, present condition, and prospects. By L. A. A. De Verteuil, M.D.P. Second edition. Cassell & Co., London, Paris, and New York: 1884. 1 Vol. 8vo. 484 pp.]

So little is done by the numerous English residents in the West Indies to aid the cause of Natural History that we are glad to call attention to the second edition of De Verteuil's work on Trinidad recently issued. It contains two chapters on the birds of the island, one by the author himself under the general head of the "Animal Kingdom" (pp. 89–97), and another specially devoted to the Birds by Mr. A. Léotaud, well known as the writer of the 'Oiseaux de la Trinidad' (pp. 365–381). Mr. Léotaud's list of species is old-fashioned in its nomenclature and occasionally, we fear, incorrect.

His remarks are more valuable, though we believe that the statement that the sharp noise made by the "*Casse-noisette*" (*Pipra gutturalis*) is produced by the "aid of its bill" is not correct.

12. *De Vis on the Moa in Australia.*

[The Moa (*Dinornis*) in Australia. By C. W. De Vis, M.A. Proc. R. Soc. Queensland, vol. i. p. 23, plates iii., iv.]

A portion of a bird's femur, found among a collection of bones from King's Creek presented to the Queensland Museum by Mr. J. Daniels, is referred by Mr. De Vis to a species of *Dinornis*, which he proposes to call *D. queenslandiæ* (!). The fragment consists of rather more than the upper third of a left femur minus the upper part of the head and the trochanter. It is in the "same peculiar state of mineralization as the great majority of the Darling-Downs fossils." Figures are given of this remarkable fossil, which, should its reference to the genus *Dinornis* turn out to be correct, is a most noteworthy discovery.

13. *Dresser's Monograph of the Bee-eaters.*

[A Monograph of the Meropidæ, or Family of the Bee-eaters. By H. E. Dresser, F.L.S., F.Z.S., &c. Parts I., II. Small folio. London: 1884.]

We are pleased to see the good progress already made by Mr. Dresser with his 'Bee-eaters.' It will be granted by every one that Mr. Keulemans has executed his portion of the task well. Mr. Dresser has worked out his subject thoroughly and has succeeded in getting together a great deal of valuable material in his text. We fear, however, that exception will be taken to the description of his discovery of skins of *Merops cyanophrys* in the Jardin des Plantes.

The following species are figured in the first two parts:—

Part I.

Nyctiornis amictus.
—— athertoni.
Meropogon forsteni.
Merops breweri.
Merops sumatranus.
—— bicolor.
—— viridis.

Part II.

Merops cyanophrys.
—— boehmi.
—— albicollis.
Merops ornatus.
—— philippinus.
—— persicus.

14. *Dubois on a new Parrot from New Guinea.*

[Description d'un Echidné et d'un Perroquet inédits de la Nouvelle-Guinée. Par M. Alph. Dubois. Bull. Soc. Mus. R. d'Hist. Nat. Belgique, tome iii. 1884, p. 109.]

In a fine collection of mammals and birds from New Guinea, presented to the Brussels Museum by M. C. W. R. van Renesse van Duivenbode, is an example of a new species of Parrot of the genus *Chalcopsittacus* which M. Dubois describes and figures as *Ch. duivenbodei.*

15. *Filhol on the Osteology of the Penguins.*

[Observations relatives aux caractères ostéologiques de certaines espèces d'*Eudyptes* et de *Spheniscus.* Par M. H. Filhol. Bull. Soc. Philom. sér. 7, vi. p. 226 (1882).]

M. Filhol has utilized the numerous skeletons of *Eudyptes antipodum* and *E. chrysocome* which he obtained at Campbell Island, by a careful study of their bones and a comparison of them with the corresponding bones of *Spheniscus demersus.*

16. *Filhol on the Diaphragm of the Penguins.*

[Sur la constitution du diaphragme des *Eudyptes.* Par M. H. Filhol. Bull. Soc. Philom. sér. 7, vi. p. 235.]

The specimens examined are *E. chrysocome* and *E. antipodum.* Their diaphragm consists of two portions, the usual pulmonary and a thoracico-abdominal one; the latter is partly the continuation of the *m. transversus abdominis,* and partly augmented by a peculiar muscular slip, called by M. Filhol *m. diaphragmaticus transversus.* The air-sacs are remarkably well developed, although these birds do not possess the power of flight. He distinguishes two diaphragmatic, one thoracic and abdominal, and two cervical air-sacs.

17. *Filhol on the Arterial System of the Penguins.*

[Observations relatives au tronc cæliaque et à l'artère mésentérique supérieure de l'*Eudyptes antipodes.* Par M. H. Filhol. Bull. Soc. Philom. sér. 7, vi. p. 238.]

[Observations relatives à la circulation artérielle dans l'aile de quelques espèces de Manchots. Par M. H. Filhol. *Ibid.* p. 242.]

[Observations relatives à la circulation artérielle dans le membre inférieur de quelques espèces de Manchots (*Aptenodytes pennanti, Eudyptes antipodes* et *E. chrysocome*). Par M. H. Filhol. *Ibid.* p. 243.]

Descriptions are given of the calibre and of the successive order in which the arteries supplying the intestines branch off from the common cæcial trunk.

The humeral artery in *Eudyptes antipodum* is the simple continuation of the *a. humeralis* as in other birds. In *E. chrysocome* it is broken up into numerous collateral branches down to the elbow-joint, whilst in *Aptenodytes pennanti* it is transformed into a complete plexus.

An exhaustive and exact description of the arteries of the hind limb is added. The *Sphenisci* are remarkable for the multiplicity of their arterial ramifications.

18. *Gurney on the Arctic Blue-throated Warbler in Norfolk.*

[On the Occurrence of a flock of the Arctic Blue-throated Warbler (*Erithacus suecica*) in Norfolk. By J. H. Gurney, Jun., F.Z.S. Tr. Norfolk and Norwich Nat. Soc. iii. p. 597.]

Nine examples of this species were shot, and at least a score seen, at Blakeney, between the 14th and 22nd September, 1883; and one more was killed on the 15th of the same month, near Yarmouth. On the 22nd September one was shot on the coast of Northumberland, and on the 21st one was seen at Teesmouth, in Durham. Earlier in the same year, viz. on the 2nd September, one was obtained on the Isle of May, in the Firth of Forth. Between September 15–18, 1884, several were shot and more were observed on Spurn Head, in south-east Yorkshire, as has been recorded by Mr. Theodore Fisher (Zool. 1884, p. 430).

19. *Gurney on the "Hairy" variety of the Moorhen.*

[On the "Hairy" variety of the Moorhen (*Gallinula chloropus*). By J. H. Gurney, Jun., F.Z.S. Tr. Norfolk and Norwich Nat. Soc. iii. p. 581.]

An illustration is given of a decorticated variety of a Moorhen, killed at Beckenham in Norfolk, in Nov. 1857, and now in the Cambridge Museum. Some woodcuts show that the hair-like appearance of the feathers is due to the absence of the barbules from the anterior portion of the vane of each feather, and with this substance has gone a great deal of the colouring-matter. Five, if not seven, examples of this variety have been obtained in Norfolk, and others have occurred in Nottinghamshire, Cambridgeshire, Hampshire, Suffolk, Sussex, and one at Athlone in Ireland.

20. *Haast on the Grey Phalarope in New Zealand.*

[On the Occurrence of *Phalaropus fulicarius*, Pennant (the Red Phalarope), in New Zealand. By Julius von Haast, C.M.G., Ph.D., F.R.S. Tr. and Pr. New Zealand Inst. xvi. p. 279.]

An example of this straggler from the north occurred in June 1883, on the beach near the Waimate lagoon, New Zealand. It was shot flying alone.

21. *Homeyer and Tancré on the Birds of the Altai.*

[Beiträge zur Kenntniss der Ornithologie Westsibiriens, namentlich der Altai-Gegend. Von E. F. von Homeyer und C. A. Tancré. Mitth. d. ornith. Ver. in Wien, 1883, p. 81.]

The authors follow generally the nomenclature and arrangement of Dr. Finsch's article on the birds of Western Siberia published in 1879 (Verh. zool.-bot. Ges. Wien, p. 115), supplementing it by the results obtained by their own collector on the Altai; the exact localities, however, are not given. The list contains 204 species, of which *Starna robusta* is described as new. It is apparently a larger and brighter form of *Perdix cinerea*. *Sturnus poltoratzkyi* of Finsch is condemned as a bad species.

22. *Jouy on the Birds of Japan.*

[Ornithological Notes on Collections made in Japan from June to December, 1882. By Pierre Louis Jouy. Pr. U.S. Nat. Mus. 1883, p. 273.]

Accompanied by Mr. A. J. M. Smith, Mr. Jouy made an ornithological trip in the latter half of 1882, first to Fuji-yama, where a month was passed at Subashiri, 2500 feet above the sea-level, and 326 specimens were obtained, and afterwards to the Nikko mountains and Omachi, in the province of Shinshiu. Good field-notes are given concerning 101 species. Most of them are well-known Japanese birds; but examples of *Accentor erythropygius* were obtained on Fuji-yama, and the Ptarmigan (*Lagopus*, sp. inc.) of the high peaks of the Tate-yama range was heard of, though not procured. Mr. Jouy considers *Pyrrhula rosacea* of Seebohm (Ibis, 1882, p. 371) to be only a highly developed stage of *P. orientalis.*

23. *Lawrence on a new* Hemiprocne.

[Description of a new Species of Bird of the Family Cypselidæ. By George N. Lawrence. Annals New York Acad. Sci. ii. p. 355.]

The species described is *Hemiprocne minor* from Bogota. It seems to be like *H. zonaris*, but smaller.

24. *Lydekker on Siwalik Fossil Birds.*

[Siwalik Birds. By R. Lydekker, B.A., F.G.S., F.Z.S. Mem. Geol. Surv. India, sect. x. vol. iii. pt. 4.]

In the Siwaliks, Mr. Lydekker tells us, as in most other ossiferous formations, the remains of birds are extremely scarce as compared with those of mammals, and such remains as do occur are mostly in a fragmentary condition. Little has yet been written on the fossil birds of the Siwaliks, and Mr. Lydekker's present paper is intended to give an account of all the remains which appear capable of identification. Besides some forms, the exact genera of which cannot be determined, Mr. Lydekker describes species of *Pelecanus*, *Phalacrocorax*, *Leptoptilus*, *Mergus*, *Struthio*, and *Dromæus*. *Dromæus sivalensis* is established on four phalangeal bones, which so clearly resemble those of the living Emu as to leave little doubt that a nearly allied, although possibly not generically identical, bird existed in the Siwaliks.

25. *Milne-Edwards on the Fauna of the Antarctic Regions.*

[Recherches sur la Faune des Régions Australes. Par M. Alph. Milne-Edwards. Paris: 1879–82.]

We have to thank the author for a complete copy of this important memoir, which, although finished two years ago, has not yet been noticed in this Journal. We will therefore give a short account of its contents. M. Milne-Edwards commences by a disquisition on the great question of the origin of species, into which we will not follow him, although we quite appreciate his distinction between "*espèces primordiales*" and "*espèces dérivées*." After some preliminary remarks on the geography, the flora, and the general character of the fauna of the Antarctic lands, M. Milne-Edwards proceeds to discuss specially the Antarctic birds. These are treated under the heads of Penguins, Albatrosses, Skuas, Gulls and Terns, Petrels, Sheathbills, Cormorants, Grebes, and Ducks, after which the few land-birds known to inhabit the Antarctic islands are spoken of. Among the Penguins two new genera (*Megadyptes* for *Pygosceles antipodum* and *Microdyptes* for *Eudyptula serresiana*, Oust.) are instituted, and a new species of *Eudyptes* (*E. albigularis*), from Macquarie Island, is described. A new species of Gannet from the Pacific coast of South America is described as *Sula nebouxi*. Figures are given of the heads of various forms of *Eudyptes*, as also entire figures of *Eudyptes albigularis*, *Microdyptes serresiana*, *Sula dactylatra*, and *S. nebouxi*, and six charts showing the distribution of the various groups of birds in the Antarctic regions are added.

But while we fully appreciate the value of M. Milne-Edwards's memoir and the amount of information collected in it, it must not be supposed that we fully agree with all his statements. We must conclude that there is no specimen of the Emperor Penguin in the Paris Museum, or our author could never have said that this species and the King Penguin "*ne diffèrent que fort peu l'un de l'autre*"; nor do we believe that *Spheniscus demersus* of the Cape also occurs in the Falkland Islands, or that our author is correct in his dictum (pt. i. p. 63) as to the external sexual distinctions of the *Sphenisci*. We believe that the sexes of *Spheniscus* are as nearly as may be alike in plumage.

Some criticisms by Saunders, on the account of the *Laridæ* and their distribution, will be found in P. Z. S. 1882, p. 527.

26. *Murray's 'Vertebrate Zoology of Sind.'*

[The Vertebrate Zoology of Sind. A systematic account with descriptions of all the known species of Mammals, Birds, and Reptiles inhabiting the Province; observations on their habits, &c.; tables of their Geographical distribution in Persia, Beloochistan, and Afghanistan, Punjab, North-west Provinces, and the peninsula of India generally, with woodcuts, lithographs, and coloured illustrations. By James A. Murray. Royal 8vo. London and Bombay: 1884.]

This will be a useful compilation for the local naturalist, but the original information in it is not very extensive. The number of birds now known from Sind is 399, but considerable additions are expected to be made to the list. Short descriptions are given of all the species, and summaries of their geographical distribution. On the whole Mr. Murray's volume is, in our opinion, a very creditable piece of work, when the place of its production is taken into consideration. *Serinus pectoralis*, from Kurrachee, is described as a new species.

27. *Nutting on Birds from Nicaragua.*

[On a Collection of Birds from Nicaragua. By Charles C. Nutting. Edited by R. Ridgway. Proc. U.S. Nat. Mus. 1883, p. 372.]

Mr. Nutting went to Nicaragua in the early part of 1883 for the purpose of making a collection of birds for the Smithsonian Institution. Four districts were visited:—San Juan del Sur on the Pacific; Sucuyá on the west shore of the Lake of Nicaragua; Ometepe, an island on the Lake; and Los Sábalos, on the river San Juan del Norte. The species have been determined by Mr. Ridgway, who has also added critical remarks.

Near San Juan del Sur, "a beautiful harbour surrounded by low mountains," where the banks of a stream and dense marshy forest afford good collecting-places, examples of 70 species were obtained, of which 47 are stated to be recorded for the first time in Nicaragua. At Sucuyá, a hacienda on the Lake of Nicaragua, four miles north of Rivas, examples of 88 species were procured, 49 of which are marked as new to the Nicaraguan avifauna. A nice note is given on the "dance" of *Chiroxiphia linearis*. The fertile island of Ometepe is the home of only 50 species, although numerically birds are abundant. The apparently entire absence of Turdidæ, Tanagridæ, Dendrocolaptidæ, Formicariidæ, and Rhamphastidæ is noticeable. At Los Sábalos, about 30 miles down the river San Juan del Norte, examples of 80 species were obtained, of which six are described as new, namely, *Geothlypis bairdi*, *Oryzoborus salvini*, *O. nuttingi*, *Contopus depressirostris*, *Cymbilanius lineatus fasciatus* (subsp. nov.), and *Porzana leucogaster*. Besides these Mr. Ridgway describes *Grallaria intermedia*, from Costa Rica, in a footnote.

28. *Przewalski's Journey in Tibet.*

[Reisen in Tibet und am oberen Lauf des Gelben Flusses in den Jahren 1879 bis 1880, von N. von Prschewalski. Aus dem Russischen frei in das Deutsche übertragen und mit Anmerkungen versehen von Stein-Nordheim. Jena, 1884. 1 vol. 8vo. 282 pp.]

We were lately complaining that no English account of the great traveller Przewalski's third journey into Northern Tibet had been published. We have now, however, an excellent German translation of the Russian original before us, which will render his exploits more familiar to western readers. Przewalski is, as well known, an excellent field-observer and collector, and very well acquainted with Asiatic birds. His account of the Ornithology of Northern Tibet has been already given to our readers (Ibis, 1884, p. 242). But there are several passages in the present volume, such as those on the bird-life of the Dsungarian Desert (p. 23), of the Nan-schan mountains (p. 73), and of Lake Kokonor (p. 199), which are worthy of attention; and many new species are mentioned, such as *Phasianus satscheunensis, Ph. tarimensis, Ph. strauchi, Ph. vlangalli, Sitta eckloni, Pyrgilauda kansuensis,* and *Rhopophilus deserti,* which, so far as we know, have not yet been described. *Anser indicus* was found breeding in the oasis of Sat-schen, north of the Nan-schan (p. 64).

29. *Radde's 'Ornis Caucasica.'*

[Ornis Caucasica. Von Dr. Gustav Radde. Lief. i.–xvi. 4to. Kassel: 1884.]

The first three parts of this long-expected work are now before us and carry on the general subject to the middle of the Laridæ. The introduction, giving an account of how the author was induced to undertake the task, and of his views on species are worth perusal. Dr. Radde is a decided "lumper" as regards species. For him *Garruli glandarius, krynickii, melanocephalus,* and *hyrcanus* are all one. *Sturnus unicolor* is not specifically distinct from *St. vulgaris,* much less *St. purpurascens, St. nitens,* and *St. poltaratskyi,* and the same plan is pursued in similar cases. Dr. Radde acknowledges 367 species and 66 varieties of Caucasian birds. We observe that he calls the Caspian species of *Porphyrio* "*P. veterum.*" But it has been pointed out by Sclater (Ibis, 1879, p. 195) that this name originated in error, as will be seen at once by those that will take the trouble to refer to S. G. Gmelin's 'Reise;' and, as regards the validity of the species, it has been shown by Mr. Seebohm (Ibis, 1884, p. 429) that the Caspian bird is the same as the Indian *P. poliocephalus.*

The following species are figured in Lief. i.–xvi.:—

Tab. i. fig. 1. Buteo tachardus, var. rufus.
 fig. 2. Buteo tachardus, var. fusco-ater.
ii. Buteo tachardus, var.
iii. Circus æruginosus, var. unicolor.
iv. fig. 1. Garrulus glandarius.
Tab. iv. figs. 2, 3. Garrulus glandarius, var. hyrcanus.
v. Garrulus glandarius, var.
vi. fig. 1. Acredula tephronota.
 fig. 2. Acredula tephronota, var. major.
vii. Carpodacus rubicillus.
viii. fig. 1. Montifringilla nivalis.

- Tab. viii. fig. 2. Montifringilla alpicola.
  - ix. figs. 1–4. Passer domesticus, typ. et var.
    - fig. 5. Passer salicicolus.
    - figs. 6, 7. Metoponia pusilla.
  - x. fig. 1. Crithophaga miliaria, var. minor.
    - fig. 2. Crithophaga miliaria, typ.
- Tab. xi. Budytes melanocephalus, albino.
  - xii. Motacilla alba et var.
  - xiii. fig. 1. Sylvia mystacea.
    - fig. 2. Phylloscopus rufus, var. obscurus.
  - xiv. Accentor ocularis.
  - xv. Daulias hafizi.
  - xvi. Ruticilla ochruros.

30. *Reichenow on Parrots.*

[Vögelbilder aus fernen Zonen. Atlas der bei uns eingefürhten ausländischen Vögel, mit erläuterndem Text. Allen Naturfreunden, insbesondere den Liebhabern ausländischer Stubenvögel und Besuchern zoologischer Gärten, gewidmet von Dr. Ant. Reichenow. Lief. xi. Folio. Cassel: 1883.]

The eleventh part terminates Dr. Reichenow's work, the original plan of which has been modified so as to restrict it to the Parrots. Of this group it forms, as now completed, an illustrated monograph. The systematic list at the end contains the names of 448 species, and there are, we believe, a few others, nearly all recently described, which Dr. Reichenow has not included. The figures (by Mützel) are well drawn and coloured, the plates being 33 in number. The work is decidedly of a useful nature for the ready identification of the birds of this group; but we regret to observe the many deviations from the nomenclature usually adopted.

31. *Ridgway on new Birds from the Commander Islands and Petropaulovski.*

[Descriptions of some Birds supposed to be undescribed from the Commander Islands and Petropaulovski, collected by Dr. Leonhard Stejneger, U.S. Signal Service. Proc. U.S. Nat. Mus. 1883, p. 90.]

The species described are *Haliaëtus hypoleucus* from Bering Island, *Acrocephalus dybowskii* from Petropaulovski, *Anorthura pallescens* from Bering Island, *Hirundo saturata* from Petropaulovski, and *Anthus stejnegeri* (if distinct from *A. japonicus*) from the Commander Islands.

32. *Ridgway on new Costa-Rican Birds.*

[On some Costa-Rican Birds, with descriptions of several new Species. By Robert Ridgway. Proc. U.S. Nat. Mus. 1883, p. 410.]

From a small collection lately received by the U.S. National Museum from Sr. Zeledon, Mr. Ridgway describes as new *Empidonax viridescens*, sp. nov., *Psittasoma michleri zeledoni*, subsp. nov., and gives notes on various other interesting species. Mr. Ridgway considers that *Empidonax atriceps* of Salvin is more properly congeneric with *Mitrephorus aurantiiventris*.

33. *Ridgway on West-Indian Birds.*

[On a Collection of Birds made by Messrs. J. E. Benedict and W. Nye, of the United States Fish-Commission Steamer 'Albatross.' By Robert Ridgway. Proc. U.S. Nat. Mus. 1884, p. 172.]

The collection of birds made by the naturalists of the 'Albatross' in the West Indies, and on the shores of the Caribbean Sea, although not extensive, is of much interest. Mr. Ridgway deals with it under five heads. Ten species from St. Thomas and fifteen from Trinidad were already known to us from these localities. The third category relates to the Venezuelan island of Curaçoa, almost *terra incognita* to the modern naturalist. Here of six species of which examples were obtained, three are described as new (*Mimus gilvus rostratus, Dendrœca rufo-pileata,* and *Icterus curasoensis*), and a fourth (*Zenaida vinaceo-rufa*) is provided with a suggested name in case it may not be identical with *Z. ruficauda*, Bp. Mr. Ridgway also inclines to the view that the northern form of *Icterus xanthornus* (from Guatemala, Mexico, and Panama) is distinct from the southern (S. American) form, which would stand as *I. linnæi* (Bp.). But does this species or any form of it occur north of Panama? We know of no evidence of such being the case. From the vicinity of Sabanilla, U.S. of Colombia, specimens of eight species were procured by the 'Albatross,' all well known. Lastly, on the island of Old Providence, which lies in the middle of the Caribbean Sea, 250 miles north of Aspinwall, four species, all new, were discovered—*Certhiola tricolor*, *Vireosylvia grandior*, *Vireo approximans*, and *Elainea cinerascens*.

34. *Ridgway on a new Field-Sparrow.*

[Description of a new Species of Field-Sparrow from New Mexico. By Robert Ridgway. Proc. U.S. Nat. Mus. 1884, p. 259.]

Spizella wortheni, allied to *S. pusilla* and *S. atrigularis*, is based on a specimen obtained at Silver City, New Mexico, and presented to the U.S. National Museum by Mr. C. K. Worthen.

35. *Robson on the breeding of the Eastern Golden Plover.*

[Observations on the Breeding-habits of the Eastern Golden Plover (*Charadrius fulvus*). By C. H. Robson. Communicated by W. L. Buller, C.M.G., Sc.D., F.R.S. Trans. and Proc. New Zealand Inst. xvi. p. 308.]

The Eastern Golden Plover was found breeding by Mr. Robson at the northern end of Portland Island, New Zealand, in January 1883.

36. *Schalow on a new Plaintain-eater.*

[Eine neue *Musophaga* aus Central-Afrika. Von Herman Schalow. Zeitsch. f. d. gesammte Ornith. Budapest, 1884, p. 103.]

From the western shore of Lake Tanganyika, Dr. R. Böhm has sent, along with an interesting letter, a sketch of the head and a short description of a species of a *Musophaga* allied to *M. rossæ*, but which Herr Schalow considers to be different, and separates as *M. boehmi*.

37. *Sharpe on the Birds of the Voyage of the 'Alert.'*

[Report on the Zoological Collections made in the Indo-Pacific Ocean during the Voyage of H.M.S. 'Alert,' 1881–82. 8vo. London: 1884.]

The Birds formed a very small part of the extensive collections formed by Dr. Coppinger during the voyage of the 'Alert;' but Mr. Sharpe gives an account of 77 species, of which examples were obtained in the islands of Torres Straits, at Port Molle and Port Curtis in Queensland, and at Port Darwin in N.W. Australia. *Piezorhynchus medius*, from Port

Molle, is described as new, and several species are resuscitated which were suppressed by Dr. Gadow in his recent volumes of the British-Museum Catalogue.

38. *Sharpe on various Timeliidæ.*

[Notes on Timeliidæ. By R. Bowdler Sharpe. Notes from the Leyden Museum, vol. vi. Note xxiv. p. 167.]

Mr. Sharpe gives notes upon examples of various species of Timeliidæ in the Leyden Museum which he has examined subsequently to the issue of the seventh volume of the British-Museum Catalogue; and he indicates the necessary alterations and additions to be made to that work in consequence of the information thus obtained.

39. *Sharpe on a new Wren from Timor.*

[On an apparently undescribed genus of Wrens from Timor. By R. Bowdler Sharpe. Notes from the Leyden Museum, vol. vi. Note xxv. p. 179.]

The new Wren comes very close to *Pnoepyga*, and is proposed to be called *Orthnocichla subulata.* It is the *Orthotomus subulatus* of Müller (MS.).

40. *Sharpe on Birds from New Guinea.*

[Contributions to the Ornithology of New Guinea. By R. Bowdler Sharpe.—Part IX. On further Collections made by Mr. A. Goldie in the Astrolabe Mountains. Journ. Linn. Soc., Zool. xvii. p. 405.]

Notes on three species, one of which (*Amblyornis subalaris*) is described as new.

41. *Sharpe on Birds from Equatorial Africa.*

[Notes on a Collection of Birds made by Herr F. Bohndorff in the Bahr el Ghazal Province and the Nyam-nyam Country in Equatorial Africa. By R. Bowdler Sharpe. Journ. Linn. Soc., Zool. xvii. p. 419.]

Mr. Bohndorff's collection was made principally when in company with Dr. Junker, the well-known explorer, and at Dem Suleiman, the capital of the Bahr el Ghazal. The species recorded are 112, whereof are described as new—

Crateropus bohndorffi, *Sigmodus mentalis*, *Pionias crassus*, *Centhmochares intermedius*, and *Syrnium bohndorffi*.

42. *Shufeldt on the forms of the Patella in Birds.*

[Concerning some of the forms assumed by the Patella in Birds. By Dr. R. W. Shufeldt. Proc. U.S. Nat. Mus. 1884, p. 324.]

Dr. Shufeldt points out that the patella is a characteristic bone in some cases, and describes and figures its form in certain water-birds.

43. *Smith on the Hieracideæ.*

[On *Hieracidea novæ-zealandiæ* and *H. brunnea*. By W. W. Smith. Communicated by Dr. Buller. Trans. and Proc. New Zealand Inst. xvi. p. 318.]

Mr. Smith's careful observations seem to establish the specific difference of the two species of *Hieracidea* of New Zealand.

44. *Souza on* Bucorax pyrrhops.

[Notes sur le *Bucorax pyrrhops*, Elliot. Par José Augusto de Souza. Jorn. Sci. Lisboa, no. xxxviii. 1884.]

M. de Souza gives some further characters to distinguish *Bucorax pyrrhops* from *B. abyssinicus*, as observed in a specimen of the former species lately received at Lisbon from Bissao. Two figures of the head of *B. pyrrhops* are added.

45. *Stejneger on the Natural History of the Commander Islands.*

[Contributions to the History of the Commander Islands. By Leonhard Stejneger. Proc. U.S. Nat. Mus. 1883, p. 58.]

A very interesting letter, containing an account of Mr. Stejneger's first three months' explorations in Bering Island, where he landed in April 1882. The land-fauna is essentially Palæarctic. Of the 70 species of birds of which specimens were obtained or observed, about one third are circumpolar, one third Pacific, and the remainder East-Asiatic. The American *Haliaetus leucocephalus* occurs there, and a second species of the same genus, but not *H. pelagicus*. Two species of *Rissa* (*R. kotzebui* and *R. brevirostris*) occupy the coast in countless numbers.

46. *Stejneger on the Genus* Cepphus.

[Remarks on the Species of the Genus *Cepphus*. By Leonhard Stejneger. Proc. U.S. Nat. Mus. 1884, p. 210.]

Mr. Stejneger's chief points are that a black-winged Guillemot allied to *Cepphus* (intellige *Uria*) *carbo* occurs in the North Atlantic, and that *Cepphus mandti* is the ordinary species of White-winged Guillemot in North America, although *C. grylle* may also occur there. A synopsis of all the species is added. European ornithologists are requested to examine and report upon the supposed examples of the problematical *C. motzfeldi* in the British and Leyden Museums.

47. *Travers on the Organic Productions of New Zealand.*

[Some remarks upon the distribution of the Organic Productions of New Zealand. By W. T. L. Travers. Trans. and Proc. New Zealand Inst. xvi. p. 461.]

This essay contains some good remarks on the distribution of the species of birds in the different islands of New Zealand.

X.—*Letters, Extracts, Announcements, &c.*

We have received the following letters addressed to the Editors of 'The Ibis:'—

Smithsonian Institution,
November 28, 1884.

Sirs,—I take great pleasure in corroborating Mr. Stejneger's remarks concerning the "Shedding of the Claws in the Ptarmigan and allied Birds," as I had abundant opportunity of observing it as a fact while travelling recently in Labrador and Ungava.

Yours &c.,
Lucien M. Turner.

10 Chandos Street,
Cavendish Square,
December 3, 1884.

Sirs,—Though we have not had an opportunity of comparing the types, we have little doubt that the *Phonipara* described from Roraima, in the last volume of 'The Ibis' (1884, p. 445), as *P. phæoptila* is the same as *Phonipara fumosa*, Lawrence, from Trinidad (Ann. Lyc. N. Y. x. p. 396, 1874). Both birds are described as being of a uniform fuliginous black above, unrelieved by olive-green on the back, as in the allied species *P. bicolor* &c.

We are, yours &c.,
O. Salvin and F. D. Godman.

Singular Development of Opisthocomus.—Mr. Coale, of Chicago, sends us an account of an apparently very remarkable discovery in the development of the Hoatzin (*Opisthocomus cristatus*) made by Mr. Edward M. Brigham. The exact facts are not very clearly stated in the paper (which was read before the Chicago Academy of Sciences on October 14th, 1884), but the following passage seems to contain the pith of the discovery:—

"While making embryological studies in the interior of the great island of Marajó, on the small river Anabiju, I discovered the quadruped-bird.

"After having examined many specimens of various ages, I found that from what corresponds to about the embryonic state of development of the common fowl at the tenth day of incubation, the fore feet showed their characters unmistakably throughout their egg-development, and to a period of several days after hatching the fore feet, toes, and claws held their characters as such, as unmistakably as those parts of the posterior members.

"Later a progressive modification manifested itself by reducing the digits, exfoliating the claws, and developing these anterior members into those characteristic of a bird. There is, among the higher vertebrate animals, so far as I know, no other example of post-natal metamorphosis, in such fundamental organs, to any thing like this extent.

"The law enunciated by Von Baer—that the phylogenetic development is represented in the ontogenetic—has a wide expression here. An important ancestral feature is persistent *beyond* the egg or pre-natal development. The animal progressing in its embryonic course passes into its reptilian ancestral type, and before its evolution has carried it through this—its reptilian phase—it emerges from the egg. Thus, from an egg laid by a two-footed two-winged bird, hatches a quadruped animal.

"For several days after hatching it retains its quadruped character, then, in the open air and sunlight, one pair of legs evolves into wings. Front legs are purposeless in a bird."

The National Bird-Collection at Washington.—"The bird-collection of the National Museum has increased from 93,091 at the end of 1883 to 100,126 up to October 7, 1884,—7035 specimens having thus been added since January 1. It may be of interest to our readers to know that the enumeration of the bird-record was begun with 3696 specimens, forming Professor Baird's private collection, his catalogue, written in his own hand, forming Volume i. of the 'Museum Register of Birds,' which now comprises eighteen volumes, containing a full record of the immense collection built upon Professor Baird's donation. Professor Baird's cabinet, now merged with the general collection, consisted chiefly of specimens collected, prepared, and labelled by himself and his brother, Wm. M. Baird, and its value is further enhanced by many of Audubon's types, presented to Professor Baird by Mr. Audubon. All American ornithologists will rejoice that Professor Baird has lived to see so magnificent a collection grow from the comparatively small nucleus which he formed, and with which must be connected in his memory many pleasant associations; and they all hope that he may live to witness the steady development of what is now the best collection extant of North-American and

West-Indian birds into one without a rival in any feature."—*The Auk*, i. p. 403.

Ornithological Works in Progress.—The next (tenth) volume of the 'British Museum Catalogue of Birds,' to contain the account of the Dicæidæ, Hirundinidæ, Mniotiltidæ, and allied families, is now in course of preparation by Mr. R. Bowdler Sharpe. The eleventh volume, devoted to the three great Neotropical families Cœrebidæ, Tanagridæ, and Icteridæ, has been undertaken by Sclater, and will be issued next year.

Mr. Symington Grieve announces a history of the 'Great Auk or Garefowl,' its archæology and remains, to be published by Mr. T. C. Jack, of London and Edinburgh, and Mr. F. S. Mitchell a volume of the 'Birds of Lancashire' (Van Voorst). Dr. G. Hartlaub is at work on a new collection of birds from Emin Bey. Capt. Shelley has undertaken the determination of the birds collected by Mr. H. H. Johnston on Kilimandjaro, and has already read his first paper on this subject before the Zoological Society. He has also in preparation a general list of all the known Ethiopian birds, with localities.

Our President, Lord Lilford, we are pleased to be able to add, is in sufficiently good health to undertake a new Bird-book, to be called 'Coloured Figures of the Birds of the British Islands.' The first number of this work will be ready in April next.

Proceedings of the Ridgway Ornithological Club.—The Ridgway Ornithological Club met at the Academy of Sciences, Chicago, on Thursday, Dec. 4th. A donation of skins was received from Mr. H. L. Fulton. Papers read:—"The Genus *Helminthophaga*," by Dr. Morris Gibbs; "The White-rumped Shrike" (impaling insects on barb-wire fences in Texas), by George H. Ragsdale; "The Economic Structure of Birds," by H. K. Coale.

THE IBIS.

FIFTH SERIES.

No. X. APRIL 1885.

XI.—*On two new Birds from Borneo.*

By the Rev. H. H. Slater, B.A.

(Plate IV.)

In a small collection of bird-skins from the neighbourhood of Sarawak, Borneo, for which I am indebted to Mr. W. A. Harvey, there are two interesting forms, belonging to genera not yet recorded from Borneo. One is a *Myiophoneus* (unfortunately an immature individual), on which some remarks will follow; the other is a *Parus*, which I propose to call *Parus cinerascens*.

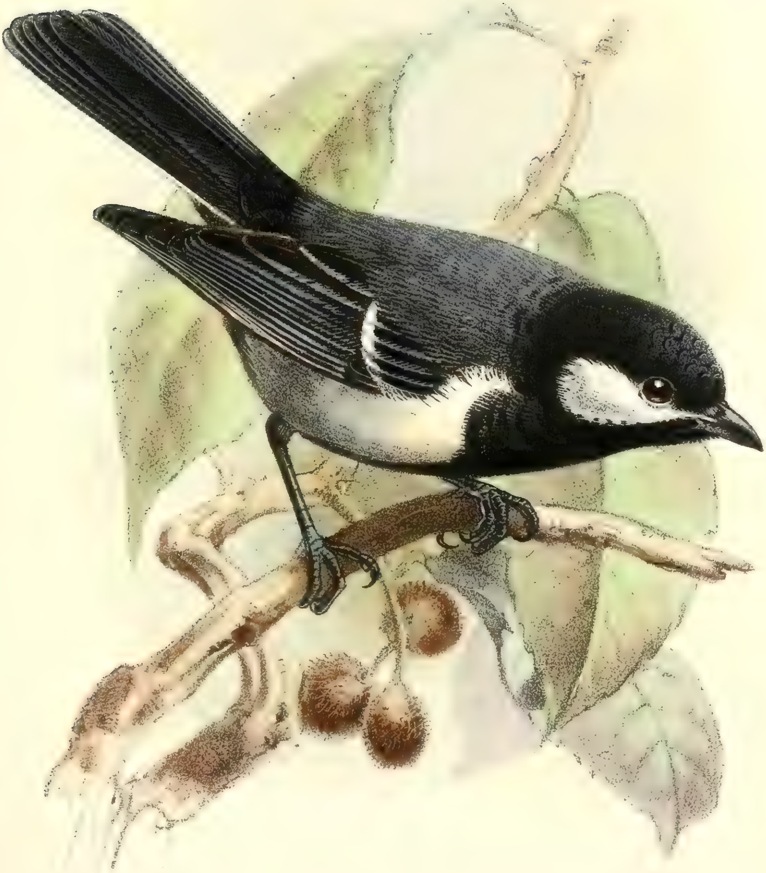
This bird belongs to the *P. cinereus* group, but is very distinct from any species yet described. It falls as below under the various heads of the key given in the British Museum Catalogue (vol. viii. p. 5):—

> "F. Neither yellow nor blue [meaning, presumably, bright blue] in the plumage; no crest.
>
> *m.* Crown black.
>
> h^4. Mantle and back blue-grey.
>
> e^5. Sides of breast and flanks white."

It differs from *P. cinereus*, its nearest ally, in having no visible nuchal patch, though a few of the feathers on the nape, if lifted, will show a small whitish spot about their centres. The black of the crown comes much further down the back (as in *P. borealis*, when compared with *P. palustris*); the black upon the chest occupies a much greater area than in *P. cinereus*, forming a large plastron, which is connected across the shoulders with the black nape, and from which a broad mesial line proceeds down the abdomen, to join the black patch which includes the lower part of the abdomen and the thighs. In *P. cinerascens* the back is much bluer than in *P. cinereus*, in which the back inclines to a buff-grey; the exterior margins of the remiges and the lesser wing-coverts are of the same blue-grey, the tips of the greater coverts forming a white bar across the wings; the sides of the abdomen are of a buffish white, darker than in *P. cinereus*, and becoming bluer towards the flanks. The upper tail-coverts are black (not grey, as in *P. cinereus*); of the under coverts, a few next the vent are white, a few next them have a longitudinal white stripe, whilst those next the tail are black; the central rectrices are of a deep sooty brown verging on black; the external one alone on each side marked with white, which occupies all its area, including the shaft, excepting a narrow marginal border to the inner web, which is black. In *P. cinereus* the outer three or four on each side show more or less white, the outermost being wholly of that colour. I append a diagnosis and comparative measurements:—

PARUS CINERASCENS, sp. n. (Plate IV.)

P. cinereo consobrinus; capite, collo, pectore, lineâ abdominali mediâ, crisso, cruribus, tectricibus caudæ superioribus nigerrimis; capite, collo et pectore aliquid nitentibus; maculâ postoculari albâ; dorso cæruleo-plumbeo; alis nigrescentibus; lateribus abdominis cinnamomeo-albidis, crura versus magis cinereis; caudâ nigrescenti; rectricibus duabus externis albis, nigro interius strictim marginatis; rostro pedibusque (desiccatis) nigris.



J. G. Keulemans lith.

Hanhart imp.

PARUS CINERASCENS

	P. cinerascens.	*P. cinereus.*
	poll. Angl.	poll. Angl.
Long. tota	4·80	5·0
Culminis	0·35	0·45
Alæ	2·65	2·5–2·6
Caudæ	2·03	2·3
Tarsi	0·65	0·7–0·75

It is somewhat singular, considering the extended range of *P. cinereus*, that this smaller bird, with a comparatively longer wing, should not have been heard of before.

Wing-formula of *Parus cinerascens*:—First primary half the length of second; second much shorter than third and equal to ninth; third and fourth longest, subequal, the third the merest shade the shortest; the rest gradually decreasing.

The single specimen in my possession was obtained by Mr. Harvey in the Bungal Hills near Sarawak.

The *Myiophoneus* above mentioned is an immature specimen, though with tolerably well-developed wings and tail, and therefore is hardly worth full description. It would have been expected to resemble more or less closely the rare Sumatran species *M.* (*Arrenga*) *melanurus*, Salvad.; but the points of resemblance seem to lie in the black colour, in the whitish centres to the flank-feathers, which are only seen when the feathers are ruffled (and in which it resembles most, if not all, other known species), and in a faint purplish gloss upon the feathers of the shoulders and lesser wing-coverts, much like that in the Purple Sandpiper. There is no trace of the reddish or chestnut colour of the axillaries, abdomen, and tail of *M. melanurus*, which is described as appearing distinctly in the young bird as well as the old. In addition, the feathers of the throat, sides of the neck, and breast are marked with whitish central stripes, in which it appears also to differ from the Sumatran form. Lastly, as will be seen below, comparing it with the largest described Sumatran specimen, an adult female, it is a somewhat larger bird. Briefly it may be described as sooty brown in colour, with whitish stripes on the throat, breast, and sides of neck; the under wing-coverts white, edged with sooty black, and, as before mentioned, whitish centres to the feathers on the flank; bill and feet black.

	Sumatran bird, ♀ ad.	Bornean do., juv.
Length	9·50	9·90
Culmen	0·90	0·95
Wing	4·75	5·30
Tail	3·50	3·40
Tarsus	1·70	1·75

For these reasons, I venture to predict that further specimens will prove it to be distinct, and I propose to call it *Myiophoneus borneensis.* This bird was obtained by Mr. Harvey in the Bungal Hills near Sarawak.

I here acknowledge having received Mr. R. Bowdler Sharpe's valuable opinion upon both these birds, and also his kindness in placing the Museum specimens at my service for purposes of comparison.

XII.—*On the Birds of Central India.*—Part II.

By Lieut.-Col. C. Swinhoe and Lieut. Henry Barnes.

[Concluded from page 69.]

93. Copsychus saularis, Linn.

♂. Length 8·25 inches, expanse 11·5, wing 3·75, tail 3·3, tarsus 1, bill at gape 1, bill at front ·63.

The Magpie Robin is common, and is a permanent resident, breeding during May and June. The young can easily be reared by keeping the cage containing them in a place accessible to the parent birds, care being taken to remove them as soon as they are able to feed themselves.

94. Thamnobia cambaiensis, Lath.

The Brown-backed Indian Robin is very common, and is a permanent resident, breeding from March to July.

95. Pratincola caprata, Linn.

The White-winged Black Robin is common, and is a permanent resident.

96. Pratincola indica, Blyth.

The Indian Bush-Chat is common in the cold weather.

The first seen was on the 21st September, and later on they became very common.

97. Saxicola opistholeuca, Strickl.

The Indian White-tailed Stonechat is not uncommon during the cold season.

98. Saxicola isabellina, Rüpp.

♀. Length 6·3 inches, expanse 10·8, wing 3·6, tail 2·5, tarsus ·96, bill at gape ·75, bill at front ·5.

The Tawny Wheatear is by no means uncommon, and is frequently seen in similar places to the next.

99. Saxicola deserti, Rüpp.

♀. Length 6·5 inches, expanse 10·75, wing 3·8, tail 2·6, tarsus 1, bill at front ·5.

The Black-throated Wheatear is common during the winter months, frequenting open plains.

100. Cercomela fusca.

♀. Length 6·52 inches, expanse 10·4, wing 3·4, tail 2·75, tarsus 1, bill at gape ·8, bill at front ·51.

The Brown Rock-Chat is very common, and is a permanent resident. It commences to breed about the latter end of March, choosing a variety of very different situations for its nest—a loose tile on a roof, or space between the beams and rafters, a hole in a bank or even in a well, a niche in a stone wall, all provide sites for this very easily accommodated bird.

101. Ruticilla rufiventris, Vieill.

♀. Length 6·25 inches, expanse 9·75, wing 3·5, tail 2·25, tarsus 1, bill at gape ·78, bill at front ·41.

The Indian Redstart is very common during the cold season; it commences to assume the breeding-plumage before leaving us.

102. Cyanecula suecica, Linn.

The Bluethroat is not common; it frequents the rank vegetation on river-banks and margins of lakes.

103. Acrocephalus stentoreus, Hempr.

The Large Reed-Warbler is a winter visitant only.

104. Sutoria sutoria (Forst.).

The Tailor-bird is very common, and is a permanent resident. Its nest is so well known that description is needless.

105. Burnesia socialis stewarti (Sykes).

Stewart's Wren-Warbler is very common, and is a permanent resident.

106. Prinia inornata, Sykes.

The Common Wren-Warbler is very generally distributed. Its eggs are most beautiful.

107. Cisticola buchanani (Blyth).

The Rufous-fronted Wren-Warbler is very common, and is a permanent resident, breeding at the commencement of the monsoons.

108. Hypolais rama, Sykes.

Sykes's Warbler is not uncommon during the cold season. We have not noticed it during the hot weather nor during the monsoon; and are of opinion that it is not a permanent resident, and does not breed here.

109. Phylloscopus indicus, Jerd.

The Olivaceous Tree-Warbler is not uncommon during the cold season. We met with it near Mhow, but have not noticed it at Neemuch.

110. Sylvia jerdoni, Blyth.

♀. Length 6·8 inches, expanse 9, wing 3·2, tail 2·75, tarsus ·88, bill at gape ·9, bill at front ·6.

The Large Black-capped Warbler is not uncommon during the winter months.

111. Sylvia affinis, Blyth.

The Allied Grey Warbler is common during the winter months. We are of opinion that this bird is not specifically distinct from the Common Whitethroat of England.

112. Motacilla maderaspatensis, Gm.

Length 8·75 inches, expanse 11, wing 4·1, tail 4·1, tarsus 1, bill from gape ·88, bill at front ·54.

The Pied Wagtail is very common, and is a permanent resident, commencing to breed quite early in February, and has at least three broods during the year.

113. Motacilla alba, Linn.
The White Wagtail is fairly common.

114. Motacilla personata, Gould.
The Black-faced Wagtail is not uncommon.

115. Motacilla melanope, Pall.
The Grey-and-Yellow Wagtail is very common during the cold season.

116. Motacilla cinereocapilla, Sav.
The same remark applies to the Indian Field-Wagtail.

117. Motacilla citreola, Pall.
The Yellow-headed Wagtail is not very abundant.

118. Anthus trivialis, Hodgs.
The Tree-Pipit is a winter visitant only, at which season it is very common.

119. Corydalla rufula, Vieill.
The Indian Titlark is common and breeds here.

120. Agrodroma campestris, Linn.
The Stone-Pipit is not uncommon.

121. Agrodroma jerdoni, Finsch.
Jerdon's Rock-Pipit occurs during the cold season.

122. Zosterops palpebrosa, Temm.
The White-eyed Tit is very common, and is a permanent resident, breeding about June and July. It appears to be much more common in the cold weather than at other times.

123. Parus nipalensis, Hodgs.
The Indian Grey Tit is very common; it is a permanent resident.

124. Machlolophus xanthogenys, Vig.
The Yellow-cheeked Tit is common in well-wooded districts.

125. Corone macrorhyncha, Wagl.

The Indian Crow is very common; it associates with its congener *C. splendens,* and breeds during March and April.

126. Corone splendens, Vieill.

The Ashy-necked Crow is very common, and breeds during May and June.

127. Dendrocitta rufa, Scop.

The Indian Tree-Pie is very common; it is a permanent resident, and breeds during April.

128. Sturnus vulgaris, Linn.

The Starling is not uncommon during the cold weather.

129. Acridotheres tristis, Linn.

The Myna is very common, and is a permanent resident, breeding in June.

130. Acridotheres ginginianus, Lath.

The Bank-Myna, although not uncommon, is very locally distributed; it is a permanent resident, breeding during May.

131. Sturnia pagodarum, Gm.

The Black-headed or Brahminy Myna is fairly common, but is usually seen singly or in pairs. It is a permanent resident and breeds in April and May.

132. Pastor roseus, Linn.

The Rose-coloured Starling is very common, in winter only.

133. Ploceus philippinus, Linn.

The Weaver-bird is a very common, permanent resident, breeding during the monsoon.

134. Ploceus manyar, Horsf.

The Striated Weaver-bird is not so common as the last. It breeds during the monsoons, among the reeds at the edges of tanks.

135. Ploceus bengalensis, Linn.

The Black-throated Weaver-bird is rare: only one specimen secured.

136. Amadina malabarica, Linn.

The Plain Brown Munia is very common, and is a permanent resident.

137. Estrelda amandava, Linn.

The Red Waxbill is very common in suitable localities. It is a permanent resident.

138. Estrelda formosa, Lath.

The Green Waxbill, although not observed by us, must occur, as on several occasions caged birds have been bought at Mhow from local bird-catchers of the Wagree caste.

139. Passer domesticus, Linn.

The House-Sparrow is very common.

140. Gymnorhis flavicollis, Frankl.

The Yellow-throated Sparrow is very common, and is a permanent resident, breeding in holes in trees, walls, &c.

141. Euspiza melanocephala, Scop.

The Black-headed Bunting is not uncommon during the winter months.

142. Euspiza luteola, Sparrm.

The Red-headed Bunting is also common in the cold weather.

143. Melophus melanicterus, Gm.

The Crested Black-and-Chestnut Bunting is common on the hills, but does not appear to descend to the plains.

144. Carpodacus erythrinus, Pall.

The Common Rose-Finch is not rare during the winter months.

145. Mirafra erythroptera, Jerd.

The Red-winged Bush-Lark is very common, and commences to breed in March. The nest is domed.

146. Mirafra cantillans, Jerd.

The Singing Bush-Lark is not uncommon.

147. Ammomanes phœnicura, Frankl.

The Rufous-tailed Finch-Lark is very abundant, and breeds during April and May. Jerdon's measurements for the bill appear incorrect. The average length of some score of specimens is ·5, whereas he gives 1 inch.

148. Pyrrhulauda grisea, Scop.

The Black-bellied Finch-Lark is very common, and appears to breed at all seasons of the year.

149. Calandrella brachydactyla, Leisl.

The Short-toed or Social Lark occurs in numerous flocks during the cold season.

150. Alauda raytal, Blyth.

The Indian Sand-Lark is very common.

151. Spizalauda deva, Sykes.

The Small Crested Lark is fairly common; it is a permanent resident, and breeds during the monsoon.

152. Alauda gulgula, Frankl.

The Indian Sky-Lark is common, and breeds during April and May.

153. Crocopus chlorogaster, Blyth.

The Southern Green Pigeon is common.

154. Columba intermedia, Strickl.

The Blue Rock-Pigeon is very common, breeding freely in all the old wells and mosques throughout the district; it does not seem to be venerated so much as it is in Rajputana proper.

155. Turtur meena, Sykes.

The Rufous Turtle-Dove is very common at and near Mhow.

156. Turtur senegalensis, Linn.

The Little Brown Dove is very common.

157. Turtur suratensis, Gm.

The Spotted Dove is not uncommon, but is very locally distributed. It breeds during September and October.

158. Turtur risorius, Linn.

The Ring-Dove is very common.

159. Turtur tranquebaricus, Herm.

The Ruddy Turtle-Dove is not uncommon, but is locally distributed.

160. Pterocles arenarius, Pall.

The Large Sand-Grouse, or, as it is generally called by sportsmen, the "Imperial Grouse," is common at and beyond Nusseerabad, but only occurs in the vicinity of Neemuch as a rare straggler.

161. Pterocles fasciatus, Scop.

The Painted Sand-Grouse is common, but very local.

162. Pterocles exustus, Temm.

The Common Sand-Grouse, as its name implies, is excessively common, and breeds apparently all the year round.

163. Pavo cristatus, Linn.

Peafowl are common, but only in a semi-domesticated state, in and near villages.

164. Gallus sonnerati, Temm.

The Grey Jungle-fowl is not uncommon in bamboo-jungle on the principal hill-sides.

165. Galloperdix spadiceus, Gm.

The above remark applies also to the Red Spur-fowl.

166. Francolinus pictus, Jard. & Selb.

The Painted Partridge is common, and is a permanent resident.

167. Ortygornis pondiceriana, Gm.

The Indian Grey Partridge is very common.

168. Perdicula asiatica, Lath.

The Jungle Bush-Quail is common in suitable localities.

169. Perdicula argoondah, Sykes.

The Rock Bush-Quail is very common.

170. Coturnix communis, Bonn.

The Large Grey Quail is very common during the cold season.

171. Coturnix coromandelica, Gm.

The Black-breasted or Rain-Quail is very abundant; it is a permanent resident, and breeds after the rains.

172. Turnix taigoor, Sykes.

The Black-breasted Bustard-Quail is not uncommon.

173. Turnix joudera, Hodgs.

The Larger Button-Quail is far from common.

174. Turnix dussumieri, Temm.

The Button-Quail is rare.

175. Sypheotis aurita, Lath.

The "Leek" is common during the rains, at which season it breeds; but some of them remain in the neighbourhood of Mhow throughout the year.

176. Cursorius coromandelicus, Gm.

The Indian Courier-Plover is common; it is a permanent resident, breeding during April.

177. Charadrius fulvus, Gm.

The Asiatic Golden Plover is very common during the cold weather.

178. Ægialitis cantiana, Lath.

The Kentish Ringed Plover is common during the cold weather.

179. Ægialitis dubia, Scop.

The Indian Ringed Plover is common.

180. Ægialitis minuta, Pall.

The Lesser Ringed Plover is common; it is a permanent resident, and breeds during the latter end of March and April.

181. Chettusia villotæi, Audouin.

The White-tailed Lapwing is rare; a single pair only were procured at Kerbulla, about two miles from Neemuch.

182. Chettusia cinerea, Blyth.

The Grey-headed Lapwing is rare, and was only obtained at Depalpore in January 1882.

183. Lobivanellus indicus, Bodd.

The Red-wattled Lapwing is very common, breeding from April to June.

184. Lobipluvia malabarica, Bodd.

The Yellow-wattled Lapwing is very common, assembling in vast flocks on the plains during the cold season; but about March they break up into pairs, and commence breeding soon after.

185. Hoplopterus ventralis, Cuv.

The Spur-winged Lapwing is rare.

186. Esacus recurvirostris, Cuv.

The Large Stone-Plover is not uncommon on the bed of the Retam River, and must occur on the Nerbudda and Chambal rivers.

187. Œdicnemus scolopax, S. G. Gm.

The Indian Stone-Plover is very common.

188. Grus antigone, Linn.

The Sarus is exceedingly common, and is a permanent resident, breeding during the rains.

189. Gallinago stenura, Kuhl.

The Pintail Snipe is very abundant during the cold weather.

190. Gallinago gallinaria, Gm.

The Fantail Snipe is still more common.

191. Gallinago gallinula, Linn.

The Jack Snipe is not uncommon.

192. Rhynchæa bengalensis, Linn.

The Painted Snipe is common, and breeds during May, June, and July. Not observed during the cold weather.

193. Limosa ægocephala, Linn.

The small Godwit occurs at the Depalpore and other large lakes in the cold weather. It is a most excellent bird for the table.

194. Numenius lineatus, Cuv. [? N. arquatus.]

The Curlew is rare, once seen at Gungrar near Chitor.

195. Machetes pugnax, Linn.

The Ruff is not common, and only occurs during the cold season.

196. Tringa minuta, Leisl.

The Little Stint is common in the winter.

197. Rhyacophilus glareola, Linn.

The Spotted Sandpiper only occurs as a winter visitant.

198. Totanus ochropus, Linn.

The Green Sandpiper is also common during the winter.

199. Tringoides hypoleucos, Linn.

The Common Sandpiper is not uncommon. A few apparently remain to breed, as occasionally they are met with throughout the hot season.

200. Totanus glottis, Linn.

The Greenshank is common during the cold season.

201. Totanus stagnatilis, Bechst.

The Marsh-Sandpiper occurs during the cold season.

202. Totanus fuscus, Linn.

The Spotted Redshank is a common cold-weather visitant.

203. Totanus calidris, Linn.

The Redshank is another very common but local visitant.

204. Himantopus candidus, Bonn.

The Stilt-Plover is common, but does not remain to breed.

205. Recurvirostra avocetta, Bonn.

The Avocet is very rare, a single specimen only having been obtained at Gungrar.

206. Parra indica, Lath.

The Bronze-winged Jacana is common on the larger tanks; it is a permanent resident and breeds here.

207. Hydrophasianus chirurgus, Scop.

The Pheasant-tailed Jacana is abundant, and is a permanent resident, breeding during the rains.

208. Porphyrio poliocephalus, Lath.

The Purple Coot is a common permanent resident, breeding at the end of the monsoons.

209. Fulica atra, Linn.

The Bald Coot is very common.

210. Gallinula chloropus, Linn.

The Water-Hen is very common, breeding during and just after the rains.

211. Porzana akool, Sykes.

The Brown Rail is not uncommon; it is a permanent resident, breeding in August.

212. Porzana bailloni, Vieill.

The Pigmy Rail is common.

213. Rallus indicus, Blyth.

The Indian Water-Rail is not very common, but occurs in most of the larger tanks.

214. Leptoptilus argala, Lath.

The Adjutant is very common during the rains.

215. Leptoptilus javanicus, Horsf.

The Hair-crested Stork is rare.

216. Xenorhynchus asiaticus, Lath.

The Black-necked Stork is common.

217. Ciconia nigra, Lath.

The Black Stork is rare; it was seen once only, but was not secured.

218. Dissura episcopus, Bodd.

Occurs sparingly throughout the district.

219. Ardea cinerea, Linn.

The Blue Heron is common.

220. Ardea purpurea, Linn.

The Purple Heron is also abundant.

221. Herodias torra, Buch.

The Large Egret is not uncommon.

222. Herodias intermedia, Hass.

The Smaller Egret is common.

223. Herodias garzetta, Linn.

The Little Egret is also common.

224. Bubulcus coromandus, Bodd.

The Cattle-Egret is very common.

225. Ardeola grayii, Sykes.

The Pond-Heron is common, and breeds during April and May.

226. Butorides javanica, Horsf.

The Little Green Bittern is common, but often escapes notice, owing to its crepuscular habits.

227. Nycticorax griseus, Linn.

The Night-Heron is common.

228. Tantalus leucocephalus, Forst.

The Pelican Ibis is very common, and breeds in colonies about the end of March. There is a colony at Hir, about ten miles from Neemuch. It is often called the Painted Adjutant.

229. Platalea leucorodia, Linn.

The Spoonbill is very common.

230. Anastomus oscitans, Bodd.

The Shell-Ibis is not very common.

231. Ibis melanocephalus, Lath.

The White Ibis is not common.

232. Inocotis papillosus, Temm.

The Wart-headed Ibis is abundant.

233. Falcinellus igneus, S. G. Gm.

The Glossy Ibis is not very common.

234. Anser cinereus, Mey.

The Grey-Lag Goose is very abundant on the larger tanks.

235. Sarcidiornis melanonotus, Penn.

The Muktah or Black-backed Goose is common, and is a permanent resident.

236. Nettapus coromandelianus, Gm.

Length 13·2 inches, wing 6·5, tail 2·74, bill at front ·1, tarsus ·1.

The White-bodied Goose Teal is common at Jeerun, near Neemuch, and on most of the larger tanks. It is a permanent resident.

237. Dendrocygna javanica, Horsf.

The Whistling Teal is very common, and is a permanent resident.

238. Tadorna casarca, Pall.

The Ruddy Sheldrake, or Brahminy Duck, is very common.

239. Spatula clypeata, Linn.

The Shoveller is excessively abundant.

240. Anas boschas, Linn.

The Mallard is, except perhaps the Wigeon, the least numerous of all the ducks that frequent the district in the cold weather.

241. Anas pœcilorhyncha, Forst.

The Spotted-billed Duck is very common, and is a permanent resident.

242. Anas caryophyllacea, Lath.

The Pink-headed Duck is very plentiful in Lake Depalpore during the winter months.

243. Chaulelasmus streperus, Linn.

The Gadwall is very abundant.

244. Dafila acuta, Linn.

The Pintail is very common.

245. Mareca penelope, Linn.

The Wigeon is uncommon.

246. Querquedula crecca, Linn.

The Teal is excessively abundant.

247. Querquedula circia, Linn.

The Garganey is another very common species.

248. Fuligula ferina, Linn.

The Pochard is not very common.

249. Nyroca ferruginea, Gmel.

The White-eyed Pochard is very common.

250. Fuligula cristata, Leach.

The Crested Pochard occurs in small numbers on all the tanks.

251. Podiceps minor, Gmel.

The Little Grebe is abundant on all the tanks, even on those which dry up during the hot season. They breed at the end of the rains.

252. Sterna seena, Sykes.

The Large River-Tern is not uncommon.

253. Sterna melanogaster, Temm.

The Black-bellied Tern is common.

254. Phalacrocorax fuscicollis, Steph.

The Lesser Cormorant is not very common.

255. Phalacrocorax pygmæus, Pall.

The Little Cormorant is by no means abundant, and appears to be very locally distributed.

256. Plotus melanogaster, Penn.

The Indian Snake-bird is common, and is very generally distributed over the whole district.

XIII.—*Notes on some Eastern Owls.*

By J. H. Gurney.

In the interesting paper on the Birds of New Guinea contributed by Mr. Sharpe to the Journal of the Linnean Society (Zoology), vol. xvii. (referred to in the present vol. of 'The Ibis,' p. 115), the author remarks (p. 407), under the head of *Ninox theomacha*, "until contrary evidence is adduced, I shall consider *N. theomacha* is the male and *N. goldiei* the female of the same species" I am desirous of submitting three items of "contrary evidence" which lead me to hold that these two species are certainly distinct from each other.

1st. In 'The Ibis,' 1884, p. 171, I gave the measurements of two males and one female of *Ninox theomacha*, these specimens having all been sexed by the collector, Mr. Bruijn, whose accuracy I have no reason to doubt.

2nd. In 'The Ibis,' 1883, p. 170, I gave the corresponding measurements of three specimens of *Ninox goldiei*, and my reasons for believing that these three birds consisted of two males and one female.

3rd. So far as I am aware, *N. goldiei* has only been met with in South-eastern New Guinea, whereas *N. theomacha* not only occurs in that locality but also in Northern New Guinea and in the islands of Jobie, Misol, and Waigiou.

I wish to take this opportunity of also referring to the geographical distribution of a nearly allied but more southern species, *Ninox maculata*. Mr. Sharpe, in his 'Catalogue of *Striges*,' gives the habitat of this Owl (p. 175) as "Van Diemen's Land" only; Mr. Gould, however, in both his works on the Birds of Australia, states that the species "also inhabits South Australia and New South Wales, but in far less numbers" than in Tasmania. I am now desirous of recording its existence in another locality. A specimen from Norfolk Island has for many years past been preserved in the Norwich Museum; and I have lately seen a second Norfolk-Island example, sent direct to my friend Mr. Crowfoot, of Beccles, to whose kindness I have been indebted for an opportunity of examining it. The label attached to this specimen bore the name of "More-pork," which may perhaps indicate that the cry of this species resembles that of *Ninox novæ-zealandiæ*, to which this name has, on account of its cry, been given in New Zealand. Mr. Crowfoot's correspondent in Norfolk Island informs him that he has not met with the nest of this species in that island.

The following particulars may be worthy of being here recorded respecting that rare little Ceylonese Owl *Scops minutus*. My friend Mr. Samuel Bligh, of Catton, Ceylon, in sending me one of these Owls as a donation to the Norwich Museum, remarks that before the bird was skinned, the wings, when carefully closed, extended $\frac{3}{10}$ of an inch beyond the tail, whereas in the otherwise excellent figure of this species in Legge's 'Birds of Ceylon,' the tail is represented as extending beyond the wings. I may add that the coloration of that figure agrees admirably with the specimen (a female) now sent; but another skin previously obtained by Mr. Bligh in the same locality, and also preserved in the Norwich Museum, is in the rufous phase, the rufous tints of its plumage being very rich and bright.

XIV.—*Notes on Woodpeckers.*—No. X. *On the Genus* Thriponax. By Edward Hargitt, F.Z.S.

In pursuance of my studies of the genera of Woodpeckers, I have recently worked out the species of the genus *Thriponax*, which embraces eight birds of large size, bearing some resemblance to the Great Black Woodpecker of Europe, *Dryocopus martius*. In these short essays which I send from time to time to 'The Ibis,' I have tried to remodel the arrangement of the species of Woodpeckers rather than to attempt a discussion of the characters of the various genera; and it may be that when I come to consider the latter portion of the subject in its entirety, I may have to make some alterations in the generic nomenclature employed. Considering therefore, for the present, that *Dryocopus* and *Thriponax* can be generically separated from each other, on account of the dense feathering of the tarsus in the former genus, it follows that *Dryocopus richardsi* of Tristram, from the island of Tzus Sima, is a *Thriponax*; and this is certainly one of the most interesting points determined in the present paper, as the locality lies so far outside the hitherto supposed range of the genus, which is almost characteristically Indian, as opposed to *Dryocopus*, which is essentially a Palæarctic genus. I am now able to recognize eight species of *Thriponax*, an increase of six upon the number enumerated by Malherbe in his Monograph. Cabanis and Heine, in the 'Museum Heineanum,' admit four species—*T. javensis* (*leucogaster* of Malherbe), *T. hodgsoni*, *T. jerdoni*, and *T. hodgei*. Sundevall, in his 'Conspectus Avium Picinarum,' follows the conclusions of the above-named authors. *T. jerdoni* of Cabanis and Heine is *T. feddeni* (Blanford). Both descriptions were published in 1863, but Blanford's name has always been held to have priority. *Picus crawfurdi* of Gray also belongs to the genus *Thriponax*, but has been omitted by all the above-mentioned writers; its validity has been discussed by me below.

My thanks are, as usual, due to Dr. Günther and Mr. Sharpe for the facilities for study afforded me at the Natural History Museum, and also to Captain Wardlaw Ramsay for the loan of his series of Philippine specimens, some of which are not represented in any other collection.

Key to the Species.

a. With red on the head.	
a^1. With no white on the rump.	
a^2. Chin, throat, and under surface of the body black	*hodgei.*
b^2. Chin, throat, and under surface of the body buffy white, the chin and throat striped, and the chest transversely varied with black	*pectoralis.*
c^2. Chest and upper breast black; a red malar patch	*javensis.*
d^2. "Breast having a lunulate patch of slate-colour, with small dark waves; no red malar patch"	*crawfurdi.*
b^1. With white rump.	
e^2. Lower half of abdomen and the vent black, the white on the underparts confined to the sides of the body and a narrow band across the upper part of the abdomen	***hodgsoni.***
f^2. Lower breast, entire abdomen, and vent buffy white; primaries white at the base for a third or more of their length	*feddeni.*
g^2. Underparts as in *T. feddeni*, primaries entirely black	*hargitti.*

b. With no red on the head of female (male unknown*). Most of the primaries tipped with white, and the white upon both the upper and under parts more extended than in *T. hodgsoni*, but otherwise resembling it . . . . *richardsi*.

1. THRIPONAX HODGEI.

Mulleripicus hodgei, Blyth, J. A. S. B. 1860, p. 105; Jerd. B. Ind. i. p. 285 (1862); Beavan, Ibis, 1867, pp. 320, 334; Ball, J. A. S. B. xxxix. pt. 2, p. 241 (1870); id. op. cit. xli. pt. 2, p. 279 (1872); id. Str. F. 1873, p. 63.

Thriponax hodgei, Cab. & Heine, Mus. Hein. iv. p. 106 (1863); Wald. Ibis, 1873, p. 304; Hume, Str. F. 1874, p. 189, 1879, p. 87.

Picus hodgei, Sundev. Consp. Av. Picin. p. 9 (1866); Giebel, Thes. Orn. p. 159 (1876).

Hemilophus hodgei, Gray, List Picid. Brit. Mus. p. 86 (1868).

Campethera hodgei, Gray, Hand-l. B. ii. p. 194, no. 8710 (1870).

Adult male. Forehead, crown, and elongated occipital crest bright scarlet; the malar stripe also scarlet, but duller in colour; the remainder of the plumage dull black; shafts of quills and of tail-feathers black. Total length 15·0 inches, culmen 1·87, wing 7·2, tail 5·65, tarsus 1·3; toes (without claws)—outer anterior 0·95, outer posterior 0·85, inner anterior 0·72, inner posterior 0·45.

Adult female. Differs from the adult male in having the forehead and crown black, the occipital crest alone being scarlet, and also in the absence of the red malar patch, the cheeks being black. Total length 15·0 inches, culmen 1·75, wing 7·2, tail 5·4, tarsus 1·2.

Mr. Hume gives the soft parts of this species as follows:—"Legs, feet, and claws blackish plumbeous; bill black in some specimens, but not in all, whitish and semitransparent at the tip; irides yellowish white to pale yellow."

* When we become acquainted with the male of *T. richardsi*, it may be necessary to remodel the present key to the species.

This species appears to be confined to the Andaman Islands. Colonel Tytler, in his notes made at Port Blair (Beavan, Ibis, 1867, p. 320), observes, "This noble Woodpecker is not uncommon on the mainland; I have had several shot and sent to me." Mr. V. Ball also procured it in the same islands; and Mr. Hume ('Stray Feathers,' 1874, p. 189) says "this species appears to be tolerably common throughout the Andaman group; the total length, taken from the fresh bird, is from 14·5 to 15·75 in." I have in my collection specimens from Port Blair (*Wimberley*), also one from Mt. Harriet, S. Andamans (*W. Davison*).

2. THRIPONAX PECTORALIS.

Thriponax pectoralis, Tweedd. P. Z. S. 1878, pp 340, 379; Ramsay, Tweedd. Mem. p. 596, & App. pp. 655, 670 (1881).

Adult male (type of species). Back, wings, and tail, also their coverts, black, the extreme base of the inner webs of the quills white; shafts of quills and of tail-feathers black, those of the latter brown at the base; a concealed patch of white on the rump, the feathers being tipped with black, and having a marginal spot of white on each web, these feathers being hidden by the elongated ones of the lower back; nasal plumes black, the extreme base buffy white; forehead, crown, occipital and nuchal crest, and also the malar patch, scarlet, the bases of the feathers of the forehead and crown being dusky, and the bases of the crest-feathers creamy white; hind neck black, a few of the feathers having red tips; lores and orbital region black; sides of the face and neck, chin, throat, and fore neck white, each feather having a black central stripe, this being broader on the feathers of the neck; a few of the feathers of the throat and fore neck having the extreme tip tinged with red; chest, breast, and under surface of the body clear pale buff, with a slight tinge of yellow, the feathers of the chest having their bases and centres black and partly concealed, those of the upper breast having a partially hidden broad black central patch on their basal portion, on the lower feathers the black being reduced to a small longitudinal spot in the centre and quite concealed; thigh-feathers centred with black; tibial plumes fulvous white, with black bases and a concealed white spot; under tail-coverts black; under wing-coverts and axillaries fulvous white, the lower coverts being sparingly spotted with black; edge of wing black: "upper mandible horny black, horny whitish at the tip; lower mandible horny black on the basal third, the remaining portion yellowish" (in skin). Total length 16·5 inches, culmen 1·9, wing 7·9, tail 6·65, tarsus 1·35; toes (without claws)—outer anterior 0·9, outer posterior 0·9, inner anterior 0·75, inner posterior 0·5.

Young male. Resembles the adult male, but differs in having the chin, throat, fore neck, and also the sides of the face and neck (the orbital region excepted) dingy white, and the black striations not so clearly defined; the feathers of the cheeks dull white, with dusky bases, a few assuming their red tips; the feathers of the hind neck tipped with dingy white, as are also the lower scapulars and a few of the rump-feathers, while some of the concealed outer feathers of the latter region are becoming pure white, with a dusky black spot at the tip; under surface of the body less tinged with yellow; under wing-coverts whiter.

Adult female. Differs from the adult male in having the forehead and crown black, and in the absence of the red malar patch, the cheeks being, like the rest of the face, white striped with black; the feathers of the throat and fore neck without a trace of red on any of their tips. Total length 16·5 inches, culmen 1·9, wing 7·85, tail 6·65, tarsus 1·35.

An adult male from the island of Panaon has the rump partly white, some of the feathers having a dusky black central stripe at the tip, others having the tip dusky black, with a marginal stripe-like spot of white on each web, but the greater part of the white patch on the rump is covered by the black feathers of the lower back. An adult female from the same locality, also in the collection of Capt. Wardlaw Ramsay, has the rump considerably damaged, but it does not show any indication of having been white. It is scarcely probable that the white feathers of the rump are exposed in life, as in only one specimen out of the five collected by Mr.

Everett are they observed without removing the upper black feathers, and the skins are carefully made up. It would be almost impossible for Mr. Everett, with his experience, to overlook such a character, or that it should be lost if it had existed. In the female bird from Panaon many of the feathers of the under surface of the body have a large central stripe or patch of black, and some have a small central stripe, more or less concealed by the buff tips of the overlying feathers.

It is difficult to account for the peculiar phase of plumage exhibited by this specimen, which appears to be fully adult, and there is no reason for imagining the stage of plumage to be intermediate between the young and (what I take to be) the full-plumaged bird, which has the underparts uniform. It is, most likely, nothing more than an abnormally marked bird.

This species, so far as is at present known, is confined to the islands of Leyte and Panaon, of the Philippine group. The only specimens I have seen are those sent by Mr. Everett which form part of Capt. Wardlaw Ramsay's collection. The types are from S. Leyte.

3. THRIPONAX JAVENSIS.

Picus javensis, Horsf. Trans. Linn. Soc. xiii. p. 175 (1822), ♂; Steph. Gen. Zool. xiv. p. 159 (1826), ♂; Vig. Mem. Raffl. p. 668 (1830); Less. Compl. Buff. ix. p. 314 (1837), ♂.

Picus leucogaster, Valenc. Dict. Sc. Nat. xl. p. 178 (1826), ♀; Wagl. Syst. Av. *Picus,* sp. 7, ♀ (1827); id. Isis, 1829, p. 509, ♂; Less. Compl. Buff. ix. p. 315 (1837); Temm. Pl. Col. iv. pl. 501, ♂ (1838); Sundev. Consp. Av. Picin. p. 9 (1866); Giebel, Thes. Orn. p. 162 (1876).

Picus horsfieldii, Wagl. Syst. Av. *Picus,* sp. 5, ♂ (1827).

Dryocopus javensis, Boie, Isis, 1828, p. 326.

Dryocopus leucogaster, Boie, Isis, 1828, p. 326.

Picus maximus malayensis, Bland, J. A. S. B. vi. p. 952 (1837).

Hemilophus leucogaster, Gray, Gen. B. ii. p. 439 (1846), ♀.

Hemilophus javensis, Gray, Gen. B. ii. p. 439 (1846), ♂;

Blyth, Cat. B. Mus. As. Soc. p. 55 (1849); Bp. Consp. Gen. Av. i. p. 131 (1850); id. Consp. Volucr. Zygod. p. 7 (1854); Reichenb. Handb. Scans. Picinæ, p. 386. no. 894, pl. dcxlv. figs. 4306, 4307, ♂ ♀ (1854); Motley & Dillw. Contr. Nat. Hist. Labuan, p. 29 (1855); Sclat. P. Z. S. 1863, p. 211; Gray, List Picid. Brit. Mus. p. 85 (1868); Brügg. Abhandl. nat. Ver. Bremen, 1878, p. 531.

Dryopicous leucogaster, Malh. Mém. Acad. Metz, 1848–49, p. 322.

Mulleripicus javensis, Horsf. & Moore, Cat. B. Mus. E.I. Co. ii. p. 652. no. 946 (1856–58); Jerd. B. Ind. i. p. 285 (1862).

Dryopicus leucogaster, Malh. Monogr. Picid. i. p. 47, pl. xiii. figs. 4, 5, ♂ ♀ (1861).

Thriponax javensis, Cab. & Heine, Mus. Hein. iv. p. 105 (1863); Salvad. Ucc. Born. p. 52 (1874); Sharpe, P. Z. S. 1875, p. 103; Hume, Str. F. 1875, p. 319; Tweedd. Ibis, 1877, p. 288; id. P. Z. S. 1877, pp. 689, 821; Hume & Davison, Str. F. vi. p. 135 (1878); Hume, op. cit. 1879, pp. 52, 87; Sharpe, Ibis, 1879, p. 243; Tweedd. P. Z. S. 1879, p. 69; Sharpe, tom. cit. p. 326; Nicholson, Ibis, 1881, p. 141; Kelham, tom. cit. p. 388; Sharpe, P. Z. S. 1881, p. 792; Müll. Orn. Ins. Salanga, p. 72 (1882); Nicholson, Ibis, 1882, p. 54; id. op. cit. 1883, p. 89; Oates, B. Brit. Burm. ii. p. 27 (1883); Kütter, J. f. O. 1883, p. 295.

Campethera javensis, Gray, Hand-l. B. ii. p. 193. no. 8707 (1870).

Adult male. Entire back, scapulars, wings, rump and upper tail-coverts, tail, likewise the shafts of quills and of tail-feathers, black, the outermost primaries with only a spot of white at the extreme base of the inner webs, the secondaries having their inner webs white at the base for about an inch of their length; nasal plumes black; forehead, crown, occipital crest, and broad cheek-patch crimson, the feathers of the forehead and crown having greyish bases, those of the occipital crest being white at the extreme base; face and entire neck, chin, throat, chest, and breast black, under and behind the ear-coverts, also thee hin and upper throat, varied with narrow and short white striations; abdomen, sides of the body, flanks, and thighs buffy white or pale buff, the thigh-feathers having a broad subterminal black band; vent and under tail-coverts black; outer under wing-coverts black, the inner ones buffy white; axillaries buffy white. Total length 17·0 inches, culmen 2·2, wing 8·7, tail 6·3, tarsus 1·3; toes (without claws)—outer anterior 1·05, outer posterior 0·95, inner anterior 0·78, inner posterior 0·52.

Young male. Differs from the fully adult male in having the feathers of the forehead, crown, and chest more of a scarlet, and the bases of those of the forehead and crown dusky black; the feathers of the malar patch dull crimson at the tip and the base black; a larger amount of white behind the cheeks and ear-coverts and also upon the chin and throat, the chin and upper throat being white, striped with dusky black; the white on the underparts having a slight tinge of buff; the secondary quills having the basal portion of the inner webs white for about an inch and a half of their length.

Adult female. Differs from the adult male in having the forehead and crown black, the occipital crest alone being crimson. Total length 16·0 inches, culmen 2·1, wing 8·75, tail 6·2, tarsus 1·22.

Mr. Davison gives the soft parts of this species as follows:—"Legs and feet pale plumbeous to leaden blue; iris creamy white, creamy yellow, clear yellow; orbital skin very dark plumbeous; bill black, lower mandible plumbeous blue to dusky plumbeous."

Specimens from various localities differ in size, those from the Philippines having the wing about an inch shorter than examples from Malacca, Sumatra, Java, and Borneo. In the birds from Luzon which have come under my notice there is a greater amount of white on the feathers of the chin and throat, as well as behind the cheeks; and the feathers of the fore neck and chest have not the slightest trace of whitish margins, such as are found in specimens from the above-mentioned islands, and are particularly pronounced in an example from the island of Negros, collected by Mr. Everett, and now in the British Museum. It is not improbable that in the islands of Luzon and Negros specimens will be met with which will be identical with the typical bird. Luzon examples have the bill blacker than those from other localities, and Mr. Everett gives the soft parts of an adult male as follows:—"Bill black; iris, feet, and claws lead-grey." Specimens from Surigao and Zamboanga are stated to have the iris yellow (these are unmistakably adult birds), and the young from Basilan is said to have the iris white.

In Tenasserim this species may occasionally interbreed with *Th. feddeni*, as I have in my collection a male specimen from Malewoon, given to me by Mr. Oates, in which the white feathers of the rump have a subterminal band of black. This, coming as it does from such a locality, is suggestive of hybridization. This bird was shot on the 29th of January, and is apparently fully adult.

The range of *Th. javensis* is very extended, embracing the southernmost portion of Tenasserim, the Malayan Peninsula, Sumatra, Banka, Java, Borneo, and also some of the Philippine Islands. In Tenasserim this species has been recorded from Mergui by Blyth; Mr. Davison obtained it at Lanyah, Bankasoon, and Malewoon. In writing on the birds of the Malayan peninsula, Lieut. Kelham observes:—"I found this handsome Woodpecker plentiful round Sagamet, some sixty or eighty miles up the Moar river. I never came across it in the north of the peninsula." Capt. Weber procured it in the island of Salanga. Mr. Hume's collection contains examples from Wellesley Province (*Stoliczka*), Malacca, Pulo Seban, Kurroo, and Johore. Messrs. Buxton and Forbes obtained this species in South-east Sumatra; and the Leiden Museum contains specimens from Banka, and also from Java, in which island it has likewise been obtained by Mr. Forbes. In Borneo it occurs near Sandakan; I have a specimen from Elopura (*Pryer*). It has been recorded from Labuan by Governor Ussher, the Hon. Hugh Low, Messrs Motley and Dillwyn, and also by Mr. Treacher. Governor Ussher and Mr. Low also obtained it in Lumbidan; Mr. Treacher sent specimens from the Lawas river.

The Marquis Doria, Dr. Beccari, and Governor Ussher procured it in Sarawak, and it was found at Banjermassing by Mr. Motley. From the Philippine Islands I have examined specimens in the collection of Capt. Wardlaw Ramsay, obtained in Luzon, Surigao, Zamboanga, and Basilan (*Everett*); and the British Museum contains an example from the island of Negros, collected by Mr. Steere.

4. THRIPONAX CRAWFURDI.

Picus crawfurdii, Gray in Griffith's Cuv. An. Kingd. Birds, ii. p. 513, fig. (1829).

Dryopicus leucogaster (pt.), Malh. Monogr. Picid. i. p. 47 (1861).

Thriponax javensis (pt.), Cab. & Heine, Mus. Hein. iv. p. 105 (1863).

Hemilophus javensis (pt.), Gray, List Picid. Brit. Mus. p. 85 (1868).

Campethera crawfurdi, Gray, Hand-l. B. ii. p. 194, no. 8709 (1870).

Picus leucogaster (pt.), Giebel, Thes. Orn. p. 162 (1876).

Thriponax crawfurdi, Hume, Str. F. 1879, pp. 87 and 409–410 (note).

The following is the description given by Gray in Griffith's edition of 'Cuvier's Animal Kingdom,' Birds, ii. p. 513 (1829), along with a figure:—

"Crawfurd's Woodpecker is from an Indian drawing brought to this country by Mr. Crawfurd, jun. The whole upper part (except the crest) is deep dark brown, sprinkled with grey on the sides of the neck; across the breast is a large lunule patch of slate colour, with small dark waves; the belly is yellow, with the like crescent-shaped spots, and the crest is deep red."

The present species is only known from Gray's description and figure (above referred to), which were taken from nature by an Indian artist for Mr. Crawfurd, jun. Many authors have confounded *Th. crawfurdi* with *Th. javensis*, and also with *Th. feddeni*; but as the bird described and figured by Gray is evidently a male: the slate-coloured patch on the breast, as well as the absence of the red malar stripe, clearly distinguishes it from *Th. javensis*, while the black rump alone would show that it was not *Th. feddeni*. Mr. Hume (Str. F. 1879, p. 409, note) corrects his former identification of the species. The confusion which formerly existed in his mind with regard to it was mainly owing to his never having seen the *coloured* figure given by Gray. There is an obvious slip of the pen in Mr. Hume's otherwise admirable note on the subject, when he states "the wings are distinctly separated so as to show the centre of the back, rump, and upper tail-coverts, and these are all blackish brown, whereas in *crawfurdi* the lower back and rump are yellowish white." He intended to speak of *Th. feddeni*, which *has* a white rump, for he adds "this alone destroys the possibility of the identity of *Th. feddeni* and *crawfurdi*."

In all probability the bird figured for Mr. Crawfurd was obtained near Ava, where this gentleman was resident; and it is a matter of surprise that other examples have not fallen to the guns of some of our painstaking and enterprising collectors in the Burmese countries.

5. THRIPONAX HODGSONI.

Hemilophus hodgsoni, Jerd. Madr. Journ. ser. 1, xi. p. 215 (1840); Gray, Gen. B. ii. p. 432 (1846); Blyth, J. A. S. B. xv. p. 283 (1846); id. Cat. B. Mus. As. Soc. p. 55. no. 245 (1849); Bp. Consp. Gen. Av. i. p. 131 (1850); id. Consp. Volucr. Zygod. p. 7 (1854); Reichenb. Handb. Scans. Picinæ, p. 386. no. 895, pl. dcxlv. fig. 4308, ♂ (1854); Gray, List Picid. Brit. Mus. p. 85 (1868).

? *Picus leucogaster*, Blyth, J. A. S. B. 1842, p. 464.

Picus hodgsonii, Jerd. Ill. Ind. Orn. pl. v. ♂ (1847); Sundev. Consp. Av. Picin. p. 9 (1866); Giebel, Thes. Orn. p. 159 (1876).

Dryopicos hodgsonii, Malh. Mém. Acad. Metz, 1848–49, p. 322.

Dryopicus hodgsoni, Malh. Monogr. Picid. i. p. 49, pl. xiii. figs. 1–2, ♂ ♀ (1861).

Mulleripicus hodgsoni, Jerd. B. Ind. i. p. 284 (1862).

Thriponax hodgsoni, Cab. & Heine, Mus. Hein. iv. p. 105 (1863); Hume, Str. F. 1876, p. 390, 1879, p. 87; Butler, op. cit. 1880, p. 386; id. Cat. Birds Bomb. Pres. p. 23 (1880); Davison, Str. F. 1883, x. p. 355.

Campethera hodgsonii, Gray, Hand-l. B. ii. p. 193. no. 8708 (1870).

Adult male. Plumage black, with the following exceptions:—the rump white; breast and upper part of abdomen, as well as the sides of the body, buffy white; the feathers of the lower part of the abdomen margined at the tip with buffy white; forehead, crown, occipital and nuchal crest, likewise the malar stripe, crimson, the bases of the feathers of the occiput and nape creamy white; a few white streaks behind the ear-coverts; primaries with a concealed white spot at the base, the secondaries having their basal portion white for an inch to an inch and a half, at most, of their length; shafts of quills and of tail-feathers black; under wing-coverts and axillaries buffy white: "bill black; legs dark plumbeous; irides crimson" (*Jerdon*). Total length 18·0 inches, culmen 2·6, wing 8·7, tail 7·2, tarsus 1·42; toes (without claws)—outer anterior 1·0, outer posterior 0·8, inner anterior 0·8, inner posterior 0·5.

Adult female. Differs from the adult male in the absence of red on the forehead, crown, and cheeks, the occipital and nuchal feathers alone being crimson. Total length 17·5 inches, culmen 2·35, wing 8·55, tail 6·7, tarsus 1·35.

The habitat of this Woodpecker, so far as is at present known, is the southern portion of India; but it is not certain that it has not a more extended range, because Mr. Blyth, under the heading of *Picus leucogaster* (J. A. S. B. 1842, p. 464), describes a bird, which he had received from Bengal, as follows:—"Differs from *hodgsoni* in having only a narrow and incomplete cross band of white on the rump."

Mr. Blyth suggests that this may be the *Picus maximus malayensis* of Bland; but the description given of the latter bird agrees with *Th. javensis*, as there is no mention of a white rump. What Mr. Blyth's bird may be I cannot say—

probably a more northern race of *Th. hodgsoni*. Dr. Jerdon, writing on this species (Birds of India, i. p. 285), says:—"This splendid Woodpecker has only been found in the most dense and lofty forests of the Malabar coast, both above and below the Ghâts. I have seen it myself, though rarely, at the foot of the Peria Pass, in the Wynaad, in Coorg, and at the top of the Ghâts near Garsoppa." Capt. Butler in his "Catalogue of the Birds of the Deccan and South Mahratta Country" (Str. F. 1880, p. 386), remarks:—"Rare; Mr. Laird obtained specimens in North Kanara and also in the forests west of Belgaum. I have no other record of its occurrence throughout the region." Mr. Davison (Str. F. 1883, p. 355) observes:—"This fine species is not uncommon in the Wynaad, where the country is well wooded, but it is so shy that it is difficult to procure specimens. It is usually found in pairs. As a rule, the bird keeps in the evergreen forests; once I shot a specimen in some bamboo-jungle at Goodalore. It does not ascend the slopes of the hills to any height." Mr. Bourdillon obtained it in Travancore, where it would appear to be not rare; and this gentleman says:—"In the neighbourhood of large undisturbed tracts of forest this bird is fairly common and not very shy, but it soon leaves districts when the forest is being cleared to any extent. I have seen this bird at from 600 to 3000 feet elevation." Although by no means so common in collections as some of the other species comprised in the present genus, *Th. hodgsoni* is so well known as not to call for any special remarks.

6. THRIPONAX FEDDENI.

Mulleripicus feddeni, Blanf. J. A. S. B. 1863, p. 75; Blyth, Ibis, 1870, p. 163.

Thriponax jerdoni, Cab. & Heine, Mus. Hein. iv. p. 105 (1863).

Picus jerdoni (ex Cab. & Heine), Sundev. Consp. Av. Picin. p. 9 (1866); Giebel, Thes. Orn. p. 161 (1876).

Hemilophus feddeni, Gray, List Picid. Brit. Mus. p. 86 (1868).

Thriponax feddeni, Wald. Ibis, 1871, p. 164; Bingham, Str. F. 1879, p. 194; Hume, tom. cit. pp. 87 & 409; Bingham, op. cit. 1880, p. 162; Oates, op. cit. x. p. 190 (1882); id. B. Brit. Burm. ii. p. 28 (1883).

Thriponax crawfurdi, Hume, Str. F. 1874, p. 471; id. and Oates, op. cit. 1875, pp. 14–66; Blyth & Wald. B. Burm. p. 75 (1875); Hume & Davison, Str. F. vi. p. 134 (1878).

Adult male. Upper and middle back, scapulars, wing-coverts, bastard-wing, primary-coverts, and quills black, the inner webs of quills white at the base, the white on the inner primaries extending for about half their length; outermost primaries tipped with white; shafts of quills black; lower back and rump white, the feathers of the lower rump margined with black at the tip; upper tail-coverts, tail, and tail-shafts black; nasal plumes black; forehead, crown, and occipital crest brilliant scarlet, bases of the feathers creamy white; a broad scarlet cheek-patch, the bases of the feathers varied with dusky and buffy white; lores, face and entire neck, chin, throat, chest, and upper breast black, below and behind the ear-coverts, likewise the chin and throat, striped with white; lower breast, abdomen, vent, sides of the body, flanks, and thighs buffy white, the thigh-feathers having a subterminal black band; under tail-coverts black, those nearest the vent margined with white; under wing-coverts and axillaries white; edge of wing black. Total length 15·0 inches, culmen 2·05, wing 8·45, tail 5·7, tarsus 1·25; toes (without claws)—outer anterior 0·95, outer posterior 0·85, inner anterior 0·72, inner posterior 0·5.

Male, fledgling. In general coloration and markings like the adult male, but differing in having the black less intense and the white purer; the bases of the feathers of the forehead and crown brownish dusky; only a few of the cheek-feathers having dull red tips, the remainder being black; a patch of white below and behind the ear-coverts; chin and throat white, with dusky spot-like stripes; the feathers of the fore neck margined with white; thighs slightly varied with dusky.

Adult female. Differs from the adult male in having the forehead, greater part of the crown, and the cheeks black.

Total length 15·0 inches, culmen 1·85, wing 8·2, tail 6·0, tarsus 1·25.

Young female. In general coloration and markings resembling the adult female, but having the black less intense and the white purer; no white stripes on the side of the neck, and the white margins of the throat-feathers not so well defined; chin buffy brown, varied with white and dusky striations; outer primaries, only, margined at the tip of the outer webs with whitish.

Mr. Oates gives the soft parts of this species as follows:—"Iris yellow; eyelids lavender-brown; legs plumbeous; claws horny grey; bill bluish black, darkest on the upper mandible and palest on the lower near the base."

This bird has not a very extended range. It occurs more or less plentifully from a short distance to the north of Thayetmyo, eastward to Tonghoo, and southward as far as the head-waters of the Thoungyeen river, and I have a specimen from Pitchaburee, W. Siam (*Carl Bock*). In the south-western portion of Pegu it has been obtained as far as Bassein by Mr. Blanford. Mr. Oates states that it "occurs plentifully in portions of Pegu. I found it very abundant near Thayetmyo and in the country lying between that town and the ridge of the Pegu hills. On the eastern slopes, between the ridge and Tonghoo, I failed to meet with it, the forests there being apparently unfitted for it. Capt. Wardlaw Ramsay, however, procured it in Tonghoo itself. I have not seen it in any part of Southern Pegu. It appears to be common on the Arrakan hills." According to Capt Feilden "it is a tolerably common bird ten or fifteen miles west of Thayetmyo, and about the same distance north." Mr. Hume's collection contains specimens from Tenasserim from the following localities:—Kyouk-nyat, Pahpoon, Thatone, Wimpong, and Larthorgee. Mr. Davison, in his note on the habitat of this species in Tenasserim (Str. F. 1876, vi. p. 134), says:—"I only met with this species at Pahpoon and in the hills to the north of that place, in the plains country between the Salween and Sittang, and again near Myawadee. It is rare, for I have not seen it more than a score of times from first to last. I have shot it in the tree-jungle and in old clearings, but I have also seen it in comparatively thick forest." Capt. Bingham (Str. F. 1879, p. 194) observes:—"I procured this handsome Woodpecker at Thaubia on the Zamee, and noticed it more than once at various places on the Wimgeo river, and on the Thoungyeen at Laidawgyee, Kyon-Khet, Oukra, and Maigla." The same author (Str. F. 1880, p. 162) further states:—"I have procured this species as far south as the head-waters of the Thoungyeen, and though not common in this valley, it is widely spread. In March 1878 I saw a number, and shot a young male on the Zammee-choung; again near Kaukarit on the Houndraw river it may be said to be fairly common."

7. THRIPONAX HARGITTI.

Thriponax javensis (pt.), Sharpe, Trans. Linn. Soc. 2nd ser. Zool. i. p. 314 (1876).

Thriponax hargitti, Sharpe, Ibis, 1884, p. 317, pl. viii.

Adult male. Upper and middle back, scapulars, wing-coverts, and quills black, the secondaries having a white patch at the base of the inner webs, and a few of the primaries having a white spot at the tip of the outer web; shafts black; lower back and rump white; upper tail-coverts, tail, and tail-shafts black; nasal plumes black; entire top of the head, occiput, and nape scarlet, the feathers of the latter parts elongated and forming a conspicuous crest, their extreme bases being whitish, the feathers of the forehead and crown greyer at the base; a broad scarlet malar patch; lores, sides of the face, chin, throat, entire neck, chest, and breast black, the chin, throat, and posterior half of the face having short white striations; remainder of the underparts, flanks, and thighs buffy white, some of the feathers of the vent black with buffy white margins; under tail-coverts black; under primary-coverts black, the lower series varied with white, the remainder of the under wing-coverts, likewise the axillaries, uniform buffy white. Total length 15·5 inches, culmen 2·15, wing 8·4, tail 6·4, tarsus 1·35; toes (without claws)—outer anterior 1·05, outer posterior 0·95, inner anterior 0·82, inner posterior 0·53.

Adult female. Differs from the adult male in having the forehead and the greater part of the crown black (the occipital and nuchal crest alone being scarlet), and also in wanting the red malar patch, the cheeks being black; a few of the thigh-feathers having a black sagittate spot at or near the tip. Total length 15·5 inches, culmen 1·9, wing 8·2, tail 6·1, tarsus 1·3.

This species has recently been described and figured by Mr. Sharpe in 'The Ibis,' 1884, p. 317, pl. viii., from specimens obtained in Southern Palawan by one of Mr. E. Lemprière's collectors. The British Museum contains an adult female of the present species, procured by Mr. Steere during his visit to the same island in 1874. *Th. hargitti* cannot, with certainty, be said to be confined to the island of Palawan, because in the British Museum are two birds (formerly in the Gould Collection) labelled "Manila," which are unmistakably true *Th. hargitti*; but I would observe that two other specimens, also in the British Museum (from the Gould Collection), and likewise labelled Manila, are true *Th. javensis*. It is hardly to be expected that these two species would be found together, and the probability is that the birds which correspond with the Palawan species were not obtained in Luzon, but in some other island of the Philippine group.

8. THRIPONAX RICHARDSI.

Dryocopus richardsi, Tristram, P. Z. S. 1879, p. 386, pl. xxxi.

Mulleripicus richardsi, Wall. Isl. Life, p. 370 (1880).

Adult female (type of species). Brownish black, having a blue-black gloss (with the following exceptions): the lower back and rump white, a few of the feathers of the lower rump having a small black spot near the tip; the two central feathers of the upper series of upper tail-coverts white, with a large heart-shaped spot of black on their apical portion, but, when the feathers of the rump are not raised, having the appearance of being black feathers margined with white; most of the primaries broadly tipped with white, and their bases to the extent of more than an inch, as well as the bases of the secondaries for at least two inches, also white; the chin and upper throat dark smoky grey; the sides of the upper throat, also the tips of the posterior cheek-feathers and the ear-coverts, finely streaked with white; the feathers of the upper breast narrowly margined at the tip with buffy white; lower breast, greater part of the abdomen, and the sides of the body buffy white, the thigh-feathers having a large spot of black on their apical portion; tibial plumes whitish at the base; lower abdominal feathers black, margined with buffy white; under wing-coverts (except on the edge of the wing) and axillaries white, with a yellowish tinge; shafts of quills and of tail-feathers brownish black: "iris, feet, and beak black" (*Richards*). Total length 19·0 inches, culmen 2·5, wing 9·8, tail 7·25, tarsus 1·3; toes (without claws)—outer anterior 1·0, outer posterior 0·85, inner anterior 0·72, inner posterior 0·55.

Canon Tristram has kindly lent me this unique and interesting bird. Before seeing it I was inclined to think that its affinity to ***Dryocopus martius*** would be closer than to the members of the genus *Thriponax*; but such is not the case, and I observe that this has been appreciated by Canon Tristram, who, in writing to me, places it in the present genus. The only known specimen is a female, and was procured by Lieut. Richards, R.N., in the island of Tzus Sima, situated between Japan and the Corea. It will be interesting to know the characters possessed by the male bird. The type specimen of the present species (but for the absence of red on the head) very much resembles the female of *Th. hodgsoni*, but it has the white both above and below more extended than in the latter species. The primaries are mostly tipped with white, a character possessed by many species of *Thriponax*, but absent in *Dryocopus*.

XV.—*A Birds'-Nesting Ramble in Lapland.*

By Alfred Crawhall Chapman.

The ornithology of the extreme north-west of Europe has not been treated of for some years in 'The Ibis,' so perhaps the following account of a trip to East Finmark during the spring of 1884 may be of interest. The district visited was the valley of the Tana, one of the great rivers which drain the area lying between the North Cape and the gulf of Bothnia. The Tana and the Muonio-Tornea rivers have their source in the same district, the former flowing northwards into the Tana Fiord, a little to the east of the North Cape; while the Muonio-Tornea, flowing in a southerly direction past Muonioniska, the scene of the late Mr. Wolley's memorable achievements, empties itself into the Gulf of Bothnia.

In crossing the North Sea, on May 21st, when two hundred miles from land, a Whinchat came on board the steamer and sought shelter near a warm steam-pipe; the unfortunate little bird must have been much fatigued, for shortly afterwards it fell dead from its perch. On the 22nd, during a short walk in the suburbs of Bergen, I was pleased to see Pied Flycatchers, the males in fine black-and-white plumage. Between the 23rd and 26th May, when going up the fiords, the usual common seafowl were to be seen; but twice I observed brown Eiders with very pale-coloured heads, which I took to be female King Eiders. On the 27th we arrived at Bodö, in Nordland (lat. 67° N.); and after obtaining permission from the magistrate there to shoot specimens, we made our way across what was formerly a marsh behind the village, but which is now drained. I suppose it would be here that the Messrs. Godman found the Great Snipe breeding (Ibis, 1861, p. 87); now nothing but an occasional Golden Plover and numerous Wheatears flitted over the dry tussocks of moss. The first birds that attracted attention were a pair of Northern Marsh-Tits (*Parus borealis*) actively searching the lower stems of the birches for food. They appeared to be much lighter in colour on the underparts than our Marsh-

Tits, and the long fluffy plumage of a slate-blue tinge is wonderfully adapted to resist the rigours of a northern winter. Magpies were very common, and I noticed them breeding in low bushes in the streets of Bodö. Presently we got among a colony of Fieldfares (*Turdus pilaris*), their nests, which we found in great numbers, being mostly placed in small birch trees from three to ten feet from the ground. I remember looking down on a Fieldfare's back, as she sat on her eggs, and remarking how ill-fitted the circular nest was to the outline of the bird's body, for I could see right into the bottom of the nest on each side of her closed wings, although the eggs were not visible. The trees being small and stunted, the nests were necessarily placed close to the main stem; they were constructed of dry white grass externally, then about an inch and a half of wet earth, and an inside lining, about an inch thick, of dry white grass. The internal diameter was invariably 4 inches, and I found afterwards that those of the Redwing (*Turdus iliacus*) were as invariably 3½ inches. The old birds occasionally hovered in the air with jerky flight, after the manner of a Pipit, uttering a peculiar cry, which could scarcely be called a song; but I think this is confined to the breeding-season; they also kept up a continual cackling, similar to the familiar note we hear in winter. While selecting some of the finest clutches of eggs, we presently saw a nest of sticks in the top of a birch tree, and on approaching, a male Merlin (*Falco æsalon*) dashed off it. Soon the female Merlin appeared, mobbed by a screeching crowd of Fieldfares, and I easily secured both these little Falcons. The nest appeared to be newly built, of thick birch-branches loosely put together, and lined with a little moss, dead leaves, and a few feathers, but deeper in the centre than the nests of the Sparrow-Hawk or Kestrel; it contained three very dark-coloured eggs. It struck me as peculiar that these active and powerful little Falcons should be quietly nesting in the very midst of a colony of Fieldfares; for there must have been at least a score of the nests of the latter within a short stone's throw of the Merlin's tree. A single Rough-legged Buzzard was seen to-day; on the low grounds

Reed-Buntings and Willow-Wrens were very common, and a Chiffchaff was seen and heard singing lustily, as well as a single Hedge-Sparrow. Blackcocks were "crooing" loudly in the still evening, and occasionally we flushed a Willow-Grouse, which seemed to be already in summer dress; its bold *bec-bec* on rising exactly resembles the cry of our British bird. Bramblings were numerous in the birch-forests, their monotonous drone, like the word *cree-ee*, being continually audible; it struck me as resembling the note of the Greenfinch, but distinctly louder and shriller. I often saw them floating about in the woods with quivering wings, somewhat reminding me of the Wood-Warbler; but they were rather wild, and it was some time before I procured one. Ring-Ouzels were common in the steep heather-clad gorges, and I saw one pair of Mealy Redpoles sitting together on a dead twig projecting from some snow, their grey breast-feathers fluffed out, and looking very disconsolate. Where the ground was wet, Redshanks and Snipes kept getting up, and I took an egg from the oviduct of a Yellow Hammer which I got here. On the 28th we took a boat, as I had heard that a pair of White-tailed Eagles bred annually on a rocky island off Bodö. We did not find them at home, however, so having landed we amused ourselves by watching a pair of Ravens (*Corvus corax*) which had a nest in the face of the crag, containing several young birds nearly ready to fly. The youngsters frequently hopped on to the side of the nest, and flapping their wings, received their first lessons in the art of flying. Directly they saw us they would drop back into the nest, whilst the old birds kept flying round, occasionally uttering a deep guttural "croak."

While watching the Ravens, a Kestrel (*Falco tinnunculus*) flew into the crag and began to make signs of disapproval at our intrusion here. He seemed to have come to the crag for the purpose of feeding, and on being fired at dropped a half-eaten Redwing. Here I observed a pair of Redstarts, and a pair of Common Scoters were busy diving in an enclosed bay of the sea. Next day we found the nest of a Hooded Crow (*Corvus cornix*), containing three newly hatched young and two eggs: amongst the wool which lined the nest was a fairly large sheet of a Bodö newspaper. We also observed a pair of Common Sandpipers on a small piece of water rather high up on the hills.

The Loffoden Islands had a fine but wintery appearance as we steamed past them on the 30th May, for from the summit of their jagged peaks down to the water's edge was one white expanse of snow. At Harstadhavn, where we waited several hours, I observed flocks of Common Gulls (*Larus canus*) feeding on the patches of cultivated land. Fieldfares' nests were also numerous, but here none of them had eggs yet, though a Hooded Crow had a nest full of half-grown young. Magpies were common. On the 31st I observed Arctic Terns for the first time. The nights now were as light as day, but there did not seem to be the least sign of summer. Tromsö was reached in the evening, and there, according to arrangements made before leaving England, I met and engaged a Norwegian servant, afterwards referred to as Trinus, to accompany me on my journey to Lapland.

June 1st–3rd. The hills north of Tromsö were clothed in snow to the water's level, and we were greeted by cold north winds and occasional snowstorms. Nevertheless, at Vœrholt, in Laxe Fiord, in spite of the cliffs being covered with snow, Common Gulls already had eggs in numbers. On the 4th June we landed at Stangenœs, in the Tana Fiord, at 3 A.M., and a dull and dreary look-out it was—great steep cliffs and rounded hills, with pure white snow down to the sea-level! Where could we expect to find birds breeding in such a country? A pair of Merlins were hawking about the shore, chasing and alarming the small birds (Wheatears, White Wagtails, and Titlarks); Cormorants, or Shags, Eiders, and Mergansers seemed plentiful, and seals were numerous. We got a boat to take us from Stangenœs, at the head of the Tana Fiord, to a little island called Gulholmen, at the mouth of the Tana river; but instead of being able to go straight up the country, as I had intended, I found that the ice in the river had not yet broken up, and about two miles above Gulholmen a white line of fast ice extended right across the stream, beyond which it was impossible to go. The river-banks and the fells above them were many feet deep in snow; the birch-forests were without a sign of leaf, and the fell-lakes were all solid ice. Sledging on the frozen river was not considered safe, as summer was too near; the use of "skiddor" was impracticable on account of the soft state of the snow; and the only means of getting about was to struggle on foot, sometimes sinking up to the arms in snow. The natives do not move about at this season of the year, but either remain indoors or make short journeys in their canoe-like boats on the open water at the mouth of the river.

In rowing up to Gulholmen we had seen several flocks of Duck sitting in the open water and on the ice-floes in the river. We accordingly got a boat and went after them. They seemed to swim very high in the water, with their tails well up, and kept uttering a melancholy sort of note, not unlike the mewing of a cat. On our approach they rose, and a string of ten flying round us, I managed to drop five, which proved to be Long-tailed Ducks (*Harelda glacialis*), already in summer plumage. Having landed to explore the snow-clad hills, we made our way up a considerable fell, and were idly throwing stones over a precipice, when a Rough-legged Buzzard (*Buteo lagopus*) slipped away from nearly beneath us. On looking over the crag we could easily see the large nest below us, containing three eggs, lying on dry white grass. The old birds kept sailing around, uttering a loud weird cry, but they would not come near; so I hid myself and sent Trinus away to attract the bird's attention. It was a long but pleasant wait. The evening was very still, the air frosty, clear, and refreshing, and on that dreary fell not a sound was to be heard, save the occasional merry chirrup of the male Wheatear. I made a note at the time how very much the initial notes of the Wheatear resemble those of the Merlin, and several times the small Chat's clear voice was mistaken for that of his most deadly enemy. Suddenly aroused by the rapid "swish" of wings close over my head, I raised my eyes, and could just see the tips of the tail-feathers of the female Buzzard as she sat on the side of her nest; several loud shouts had to be given before she realized the position, and when she flew I secured her. Her general plumage was a deep rich brown, the inside of the mouth flesh-colour, the irides hazel. As it was impossible to reach the eggs without a rope, we made our way back through the snow; and I well remember my first impressions of the lovely song of the Blue-throated Warbler (*Cyanecula suecica*). Hearing the gush of melody from amongst some scrub appearing above the snow-surface, and approaching quietly, we presently detected the rich blue throat of this handsome Warbler against the white snow. I certainly think the song of this Warbler exceeds any thing I ever heard; at times it is soft and mellow as that of a Willow-Wren, suddenly striking up to the angry hissing notes of the Sedge-Warbler, and occasionally finishing with the most astonishing metallic sound, a regular "twang, twang," not unlike the tinkling of a bell—whether in mimicry or natural song is difficult to define. I noted that the Bluethroat, as well as the Willow-Wren, were in full song at midnight here. How strange it is that such an insignificant little bird as the Willow-Wren should have such an extensive breeding-range, nesting alike in the south of Spain and on the North Cape! When we returned to our boat to-night great pieces of ice were slowly floating down the river from the frozen reaches above.

June 5th. Returned to the Rough-legged Buzzard's nest, taking with us some thirty yards of rope; but I failed to secure the male Buzzard, although he was sitting on the eggs when we got to the place. By a little manipulation we managed to reach the nest, which consisted of a mass of dead sticks about two feet thick, with a layer of solid ice about six inches thick immediately under the new grass lining on which the three eggs were lying. The nest was full of "pellets," consisting of a blue fur and small bones, either of some field-mouse or the lemming, and was, I think, the accumulation of years. Returning home that night, I secured the male Bluethroat, singing in the same place as I had seen him yesterday. A Hooded Crow's nest contained four small young to-day. Long-tailed Ducks kept continually flying up and down the river, and I saw two large Geese go up the river at night.

June 6th. Dull and cold, like winter. Opposite Gulholmen, on the other side of the river, is a level expanse of snow, from two to four feet deep, the stunted birch trees rearing their bare heads above it all, so that when walking through the snow it is necessary to push one's way through the tops of the birch-forest. In a few places, however, the snow had melted, leaving water-holes, at the bottom of which grass could be seen growing; and in these open places many birds were seeking food, amongst which I recognized Temminck's Stints (*Tringa temmincki*) flying about, with wings erect above their backs, uttering a continuous "trilling" note, and then suddenly diving down into the scrub. They were very tame, chasing each other about and manifesting signs of the approaching breeding-season. Next a pair of Lapland Buntings (*Plectrophanes lapponica*) rose from a water-hole, the male uttering a clear flute-like song as he perched on the summit of a birch tree. Then a pair of Wood-Sandpipers (*Totanus glareola*), with a splendid loud call-note, flew up, one of them deliberately lighting on the summit of a slender bough and steadying itself with outstretched wings, the other seeking shelter in the scrub. Both this bird and Temminck's Stint have yellow-ochre-coloured legs and feet. Bluethroats, Titlarks, Willow-Wrens, and Wheatears were also numerous. A thousand feet above us, in a line of lofty crags, two pairs of Peregrine Falcons (*Falco peregrinus*) and one pair of Ospreys (*Pandion haliaetus*) were circling round, their fine wild cries echoing through the crags; but when, after a laborious climb, we reached the summit of this precipice, they only soared higher, and we could see no signs of a nest. While sitting here a Raven, also evidently nesting in the crag, flew past us, his throat distended with the food he was carrying for his young. I disturbed a couple of mountain-hares here; they were just beginning to get the grey fur of summer. Large herds of reindeer were also seeking their scanty living of lichens on the highest fell-tops; these were the tame animals belonging to the Laps, but already turned out for the summer. Here they are allowed to roam at large until the autumn, and such is their instinctive dread of the pestilent mosquito, that they seldom depart from the highest and coldest parts of the fells. When skinning birds to-night I found that both the Temminck's Stints and the Lapland Buntings had very small embryo eggs in their ovaries.

June 7th. On our return to the crag opposite Gulholmen, the Ospreys were there, but only one pair of Peregrines. When sitting on the crag-top the female Osprey appeared, carrying a long twisted stick in her talons, her long thighs dangling below her. It was evident that she had a nest, and presently we found it, placed on the summit of a detached pinnacle of rock projecting from the main crag. It was utterly inaccessible, either from above or below; but we could see it contained no eggs, although it was lined out with green moss. I afterwards shot the female Osprey, and found that she had very small eggs in her ovary; the legs and feet as well as the cere were a pale pea-green colour. On the 8th June I observed the only Chaffinch (*Fringilla cœlebs*) that I saw whilst in Finmark.

June 9th. Much snow fell to-day, with a bitterly cold wind. On the sandflats at the junction of the Tana with its fiord were about a hundred Geese, sitting on the bare sand amongst some stranded ice-floes. Adjoining the sandflats, and between them and the snow-fjelds, was first a narrow space of rather long grass, with frequent pools of snow-water, and then about half a mile of semi-inundated birch-scrub. It was in the grassy parts that I first became acquainted with the Red-throated Pipits (*Anthus cervinus*). They seemed retiring in their habits, running rapidly along the ground, like a mouse, keeping the body very low and horizontal. They were difficult to see in this position, and if one approached nearer to them, a pair would spring up into the air with a shrill pipe, and allow themselves to be carried by the wind perhaps a hundred yards to leeward, when they would, with jerky flight, beat up again, to re-alight on their favourite spot.

Though I procured several, I could not detect any sexual difference in the cream-colouring on the throat.

While sheltering underneath a sand-bank from a pitiless snowstorm, a Raven came past us, his throat distended with food. Then a Rough-legged Buzzard with very light-coloured plumage alighted on a rock near at hand and sat quietly pluming himself. Presently an Osprey, with buoyant flight, loomed through the snow-flakes, and checking his speed, hovered for an instant; then, with headlong swoop, he dashed into the waters of the fiord, reappearing with a fish dangling from his talons. After shaking himself, he flew past us, and, on being fired at, dropped the fish; dissatisfied, he swooped at it when falling, but did not succeed in overtaking it. The fish proved to be a sole, 9½ inches long and 6 inches wide, with but one claw-mark in the body, and lived for many hours afterwards. While trying to ascend the side of a fjeld we distinctly made out several Geese feeding on some shallow water, and approaching nearer, I could easily see they were one or other of the two White-fronted species. Whilst watching them a male Merganser swam quite near to me, and having caught a small fish, was chased and bullied by a Herring-Gull till he was compelled to take flight. This seemed to disturb the Geese, for they ceased feeding, and with outstretched necks peered around suspiciously. When I fired at them a pair of Redshanks rose close to me, and walking home that night I secured one of a pair of Ring-Plovers by the river-side.

June 10th. Heavy snowstorms greeted us to-day. I saw the first Grey-headed Yellow Wagtail (*Motacilla cinereocapilla*) this morning, which had seemingly just arrived here. In the birch-forests, though deep in snow, we found four nests of the Mealy Redpole, all in course of construction; the old birds were absurdly tame. The nests were very pretty, lined with the white woolly material of the willow-scrub. The monotonous, though lively carol of the Redwing, which we never hear in England, was very noticeable this morning; and to-day I found the first nest, with five fresh eggs, placed about three feet from the ground in an angle formed by the stem and the fallen superstructure of a birch tree. The nest was composed entirely of very fine dry white grass, with a layer of damp moss at the foundation. There were no sticks about it, and it was very neat and compact. I both saw and heard a single Tree-Pipit (*Anthus arboreus*) singing to-day, but I unfortunately missed it. In the afternoon we again ascended the fjelds, where we observed Temminck's Stints gyrating in parties of three or four high up in the air. At 6.30 P.M. we crossed the river to Gulholmen. All then looked quiet and as usual, but at 7.30 the whole of the ice in the upper reaches of the Tana river had broken up and was coming down in tens of thousands of tons at the rate of about four miles per hour. This is the first indication that the natives have of the long-looked for change from winter to summer, though for days past wherever one went the roaring of waters could be heard, indicative of the rapid melting of the snow in the high grounds. It is this natural water-supply that is the primary cause of the breaking up of the ice; so severe is the winter in these latitudes that the river becomes frozen to the very bottom, and it requires the accumulated force of the melted snow-water, getting under the ice, to lift the mass bodily up, and once afloat, it is rapidly propelled seawards. The movement to-night took place gradually and steadily, nor was there so much of that rush and confusion which one might expect to see, where such a mighty change was taking place. It seemed, however, to create a feeling of excitement, not only in us, but in the birds; for the Geese on the opposite shores of the river, the Long-tailed Ducks, Divers, and other birds seemed to make more clamouring than usual, as if joyous at the signs of approaching summer. A single Long-tailed Skua (*Stercorarius parasiticus*) went up the river to-night, and we observed a solitary Swallow hawking round the house at Gulholmen, evidently just arrived.

June 11th. Most of the ice had gone out while we slept, and this morning we had fine warm summer weather! On the fells to-day we observed pairs of Snow-Buntings (*Plectrophanes nivalis*) flitting merrily about; they were not yet breeding, for in the ovaries of some which I examined the eggs were but slightly developed. The feathers around their bills were always stained purple with the juice of the "krokebœr," a fell-berry on which they feed. I often noticed in the hollow bare trunks of the decayed birch trees large accumulations of red berries from which Redpoles and Bramblings frequently flew up as one approached; and it seems as if these berries form a winter store for some creatures which reside there, probably squirrels, though we never saw any. The Mealy Redpole is known to winter here, but the Brambling migrates south. To-night the midnight sun was up in his fullest majesty, but no heat seemed to reach the earth, the air being clear and frosty.

June 12th. At 9.30 A.M. we left Gulholmen and, with a Lap at one end of our boat and a Qvane at the other, we "poled" incessantly up the now open river until we reached Pulmak at 3.30 A.M. on the following morning. I was surprised at the absence of bird-life, although there were extensive mud-banks and shoals, apparently well adapted for the Waders. We landed at several likely-looking spots on the way, at one of which a pair of Wood-Sandpipers clearly had a nest. Common Sandpipers, Ring-Plovers, Temminck's Stints, and Long-tailed Ducks were all the birds we observed. About six miles north of Pulmak, and about midnight, I flushed a strange-looking pair of birds from an "ene" (juniper) bush. As they went away I mistook them for Green Woodpeckers. I shot one of them as it glided away with undulating flight, and my surprise was great to pick up a Pine-Grosbeak (*Pinicola enucleator*). Just then Trinus cried out that he had found a nest, and on my coming up, there was the pretty wickerwork nest with two eggs of the Pine-Grosbeak. On looking about we soon saw the other bird sitting callously quite close to us, and she completed the series. The occurrence of this species north of the Arctic circle had not previously, according to Professor Collett (Orn. North. Norway, p. 22), been satisfactorily established. The plumage of the Pine-Grosbeak appears to have always been an unsettled problem, so I will merely state that both these birds, male and female, were of the greyish-green type, the male having rather more of the orange colour than the female. It is clear that, although the scarlet dress is considered by some to be the adult plumage, this does not necessarily imply that an immature bird cannot breed; for if such were the case here was a clear instance of two immature Pine-Grosbeaks having a nest and eggs. The birds were roosting within twenty yards of their nest, and when skinning the female I took a third egg from her oviduct. I afterwards found near Pulmak a male in full scarlet plumage paired and nesting with an ash-grey female, and a third nest was occupied by two greyish-green birds. The nest of the Pine-Grosbeak decidedly resembles that of the Bullfinch, being constructed externally of an extremely light network of thin birch-twigs firmly interlaced into each other. This substructure is overlaid by a lining of fine stiff grass, distinctly visible through the network of sticks from below. On pulling the lining to pieces an odd horsehair could be detected. The nest was placed in a small birch tree, about six feet from the ground, and very open. I was rather surprised to find the Pine-Grosbeak breeding here, as I thought it was confined to the pine districts. But I found several pairs of this bird breeding around Pulmak, where is not a sign of any thing save stunted birch and willow, and from their crops I took birch-catkins. We had considerable difficulty in effecting a landing at Pulmak, as, owing to a bend in the river, the ice had become congested and piled up in great heaps, at least ten feet high, along the shore.

June 13th. Pulmak, which is situate a little north of the 70th degree of latitude, consists of some half-dozen Lap settlements and one fairly comfortable inn. It is situated in a bend of the Tana, which is here perhaps 400 yards wide. Around are low fells, seldom rising to any great height, thickly carpeted with reindeer-moss and clad with birch-forest up to a certain level; in many cases the hills are so low that the birch reaches and crowns their summits. Close to the door of our dwelling a pair of Wigeon (*Mareca penelope*) rose this morning and I secured the drake, still in full winter plumage. Further on a pair of Rough-legged Buzzards had a nest, and were "wailing" from the crag. The nest, placed, as usual, on a ledge, and lined with dry grass, contained one egg completely congealed, and much of the colour washed out. I had to warm it in water before it would blow, although otherwise it was quite fresh. I got to-day the first Brambling's nest, a beautiful structure, with one very small egg. A Fieldfare's nest had six eggs, and two Titlarks' nests had six and four eggs, fresh. Cuckoos seemed pretty numerous. I shot some Golden Plovers to eat, and was struck with their splendid adult plumage, such as can seldom be obtained at any season of the year in Northumberland. I observe also that the male Bramblings obtained, in breeding-dress, on the Dovre Fjeld in Norway are not nearly so typically adult as those which we obtained in East Finmark.

To-day a Lap boy brought me a lovely nest with seven eggs, badly incubated, of the Great Grey Shrike (*Lanius major*?); and here I may observe that, although I afterwards obtained two more nests and eggs of this species, I was never fortunate enough to get the bird. In all cases the nests were found by the Laps and brought to me; and although I invariably returned to the nesting-place immediately with the Lap, I only once caught a glimpse of the bird, and then I did not manage to secure her. This nest was placed in a birch tree, about ten feet from the ground, and was made of white grass, profusely lined with the white feathers of the Willow-Grouse, with a few binding twigs of birch.

June 14th. A White Wagtail (*Motacilla alba*) had its nest under the turf of the roof of our dwelling, and contained six fresh eggs; the nest was lined with greyish-white reindeer-hair. Two nests of the Redwing contained five and six eggs; one of them was on the ground in a bank, entirely concealed by an overhanging juniper bush, and the eggs were much incubated. Although the fell-lakes were still completely frozen, Arctic Terns (*Sterna macrura*) were hovering over some of them, and on two small islands which we reached by walking across the ice we found two nests, each with two eggs. A singular instance of protective coloration occurred here: two of these eggs were of the most extraordinary colour, resembling very rich Merlin's eggs, the other two were of the ordinary green type. The ruddy ones were laid on a rich red carpet of moss, the green ones on green reindeer-moss. The yolk and albumen of these eggs was quite congealed with the cold. On the edge of one of these frozen lakes a Redshank's nest contained two eggs. Coming home we found a Mealy Redpole's nest with five eggs, profusely lined with feathers of "ryper," a bird which, by the way, we had not seen or heard since our arrival at Pulmak.

June 15th. Winter seemed to return, for it snowed continuously all day. In a walk along the bank of the Pulmakelf, a tributary of the Tana, we observed a single male Goosander busy fishing, also a pair of Red-necked Phalaropes (*Phalaropus hyperboreus*), very tame, and actively feeding in a quiet backwash of the river. They swim very high in the water, with a jerky motion, nodding their heads like a Waterhen, and are surprisingly quick and agile in their movements. One of them landed and sat, like a tiny Duck, preening his feathers on the bank. They seemed in mature plumage, the yellow stripes down the sides of the back being very conspicuous. A pair of Wood-Sandpipers were very tame, and allowed us to come very close to them as they were feeding, wading breast-high, in a little pool of melted snow-water.

June 16th. Coming down the Pulmakelf last night, I observed a thick-bodied Duck flying, its wings rustling in the air. I inquired of the Laps if any Ducks bred in trees about here, and a boy assured me they did, and that he knew of holes where he had seen their nests in previous years. I told him where I had seen this Duck, and this morning he returned, having found the nest and six eggs of the Goldeneye (*Clangula glaucion*). When we arrived at the place, I wondered where the nest could possibly be, so thin and small were all the trees; however, in an old stump about three feet high, with a hole in the side of it large enough for a Duck's body to enter, and about eighteen inches down, was a mass of dusky white down, with the six bluish-green eggs. No bird was about, and the eggs were cold, but quite fresh. The stump was at the top of a very steep bank, perhaps 150 feet from the river, but certainly not more than 40 feet perpendicularly above the water. When wandering in the birch-forests, we observed a Great Spotted Woodpecker (*Picus major*), and shortly after Trinus saw a Pine-Grosbeak. I secured both, and then we commenced to look for the nests, which we were lucky in finding close together. It was merely a question of looking for a thick enough tree to find the Woodpecker's nest. The first thick-stemmed tree contained the nest, and I caught the hen bird on it; she had just hatched her four eggs, so I released her. The Grosbeak's nest, similar to the one already described, contained four eggs. Presently the male Grosbeak came up, a handsome scarlet-plumaged bird. I never heard these birds utter the slightest note; they seemed to seek safety by sitting perfectly motionless on an open branch, and allowed easy approach. The hen was a greyish-green bird.

A very pretty Willow-Grouse, in adult summer plumage, which I shot to-day in Russian Finland, had an egg ready for laying in her oviduct. A Siberian Titmouse (*Parus cinctus*), flying out of an old Woodpecker's hole, made me sure of a nest and eggs, and I secured her instantly, but was disappointed to find nothing but dry chips and no eggs at the bottom. The bird was a round fluffy ball of hairy feathers, with a rather long blue tail, and was the only example I saw of this species. Titlarks were very abundant, and the nests were everywhere to be found now. A large flock of Common Scoters rose as we came down the Pulmakelf to-night. To-day was dull, but not cold, and in the evening we had sunshine, which afterwards proved to be the beginning of that continual radiance which characterizes the three months' summer season in these latitudes.

June 17th. A Qvane girl brought in the dark-coloured down and eight eggs of what she termed "Kriksa," *i. e.* Teal (*Querquedula crecca*), which she had taken that morning at the edge of a large lake a little way from Pulmak. She also brought me a peculiar open-topped nest, made of thin, stiff, black roots, lined with dead leaves, and containing six eggs of the Water-Ouzel: doubtless *Cinclus melanogaster*. The nest was different from any of those of *C. aquaticus* I have found in England.

Later in the day, after a long and fruitless search, as Trinus and I were resting on the edge of a half-frozen lough far out on the fell, a pair of Wood-Sandpipers came from somewhere and began to feed along the edge of the lough; and whilst watching them a Long-tailed Skua came past us with very rapid flight. I must have been indulging in a quiet "siesta," when Trinus touched my coat and pointed to the lough, on which, almost within gunshot, two large heavy-looking Ducks were swimming, their necks craned up, suspiciously watching us. They had just alighted, and although we were fully exposed to view, they did not seem to understand what we were, so motionless did we lie. Presently the lighter-coloured of the two began diving, the other swimming restlessly backwards and forwards along the edge of the ice. Immediately I moved, the cat-ice cracked under my feet, and the drake took a long flight; but coming high over my head, I killed him, and the duck, rising at the shot, shared a similar fate. They proved to be an adult pair of Velvet Scoters (*Œdemia fusca*). These birds were evidently seeking a nesting-place when I found them; but so arctic was the state of the fells and their lakes at this date, that I do not think either the Velvet Scoter or the Long-tailed Skua had eggs when I left the country in the beginning of July.

A pair of Whimbrels (*Numenius phæopus*) showed great anxiety long before we reached their real breeding-place; and although they used every endeavour to allure us away, I was most fortunate in walking right upon the nest and four eggs, slightly incubated, in a hole scratched in the reindeer-moss. Many pike were disporting themselves in some shallow lakes far out on the fells to-day, often jumping right out of the water. I shot one to see what it was, and it proved to be about 2 lbs. weight. We wondered greatly how these fish had ever got there, and what they did in the long winter!

Coming home that night I flushed a brace of Wigeon off the small piece of water near our house, where I had killed the mature drake before: the unfortunate duck lost her husband again, and I found he was half moulted to summer plumage.

June 18th. We found our first nest of the Blue-throated Warbler (*Cyanecula suecica*) to-day, with seven fresh eggs. It was placed on a dry bank of moss, much concealed, and was constructed entirely of fine dry grass, with a thick foundation of moss. The female, which was very tame, had a white throat, with a little blue at the edges and a touch of red and blue on the breast. All the male Bluethroats which I saw had the red spot on the throat. A Brambling's nest contained seven fresh eggs to-day; and a Raven which I shot was in full moult in all the wing-feathers, except the quills, which had been renewed, and the feathers on the neck and head, which were also new.

Coming along the edge of the Tana I found a nest and four eggs of the Shore-Lark (*Otocorys alpestris*). The nest was within ten yards of the river-side, placed in a hole scratched in the sandy ground near the bank. It was close in to Pulmak, and I must have passed the place dozens of times before, but even now I did not see the bird. Two Laps, Trinus, and I were standing wondering where the owner of the nest could be, when we suddenly caught sight of her, squatting on the ground at our very feet, her head turned towards us and her little black horns distinctly visible. The nest was made exclusively of dry white broad-bladed grasses. The eggs were of a yellowish colour, not unlike those of our Yellow Wagtail. It is strange that this bird should nest in such very different localities, for I afterwards found them, evidently breeding, on the bare fell-tops overgrown with stunted lichens and mosses, and strewn with boulders and patches of snow. A Lap brought me in to-night five eggs of what he called the "Hanga," *i. e.* Long-tailed Duck (*Harelda glacialis*). The nest was placed on the river-bank just opposite Pulmak, and as there was no down, I concluded she could not have laid her full complement of eggs. Reed-Buntings seemed common by the side of some fell-lakes which we visited to day. Although we now had fine summer weather, there was not a sign of greenness in a single tree or plant as yet, and many deep ridges of snow looked as if they were never going to melt. A single Swallow arrived at Pulmak in the evening.

June 19th. House-Martins (*Chelidon urbica*) arrived and sought the eaves of our dwelling for a breeding-place. After breakfast I shot the female Wigeon as she rose from her nest close to the house: the one egg was laid on the dead leaves under a willow bush, with scarcely a sign of a nest. This was the Duck whose two husbands I had already secured, and now she fell herself! She had a pretty brindled head, grey and black, the wing and tail-coverts mottled white all over, the flanks were brown.

June 20th. A little Lap boy brought me this morning, in a tin tray, the nest, cut out of the ground, containing three eggs, of the Dotterel (*Eudromias morinellus*), the first indication I had of this bird's presence near Pulmak. To-day Trinus and I packed up our tent and hired two Lap boys to "pole" us up the Pulmakelf as far as Pulmak Vand, a lake some seven miles long and two miles wide, about eight miles from Pulmak and about forty miles north of the great Lake Enare. We had intended pitching our tent near a Russian Finn's hut at the south end of the lake, but we were rather amazed to find, on emerging from the high banks of the Pulmak river, that the whole surface of the lake was still frozen, and that the mountains on the Russian side were deep in snow. We accordingly pitched our tent in the birch-forest near the frozen lake, and when the two Laps had roasted us some salmon-steaks with the aid of a birch fire, they returned to Pulmak, and we were left alone in the solitudes of the forest. Close to our home was the boundary line between Norwegian Lapland and Russian Finland; this line is kept distinct through the birch-forests by means of cutting down all the trees for a width of several yards, and over the bare fells by large cairns of stones set on the tops of conspicuous fell-summits.

When strolling along a pathway in the forest in the afternoon, we met the Russian Finn's daughter, who had just flushed a Willow-Grouse (*Lagopus albus*) from its nest and eleven richly coloured eggs, laid on the dead birch-leaves at the foot of an old stump. I bought these from her; but she thought they were worth at least a kröne for eating. Coming back to our tent that night I disturbed a Blue-throated Warbler from her nest under a juniper bush, containing five fresh eggs. As we lay in the tent we made notes of the nocturnal bird-songs. About 11 P.M. the woods resounded with the hoarse cackle of the Willow-Grouse. I learnt that they were in the habit of flying down to the forest-streams to drink at this hour, and certainly from 11 o'clock till midnight they were very restless and noisy. For about half an hour at midnight, though the sun shone brilliantly in a yellow sky, all was hushed, and the first bird to break the silence was the Redwing, followed immediately by the Brambling, and then the smaller Warblers joined the chorus. It is strange how short a time they seem to allow themselves for rest. In the morning, the Russian Finn, having heard from his daughter that some eccentric individuals were camping out in the woods by the lake, came and informed me that he had seen the prints of seven bears in the snow two days before, and wanted us to go after them; but the distance was great, and the chance small, so we declined.

June 21st. On the fells to-day Golden Plovers and Whimbrels were numerous. I took a nest of the former with four fresh eggs, and shot one of the latter as he perched on the topmost branch of a birch tree. When lunching we heard a peculiar *chit-chit* note in some scrub near us, and on going to see what it was, a Common Snipe (*Gallinago cœlestis*) rose, the only example of this species I observed in Finmark, or Finland, for we were now on Russian territory. A pair of Long-tailed Skuas seemed to be wandering over the fells in search of a place to breed, and I secured a splendid specimen as he came, like an arrow, right at me. The inside of its mouth was pale pink, the irides hazel, the tarsus was a pale blue, and the feet dusky black. We got our third nest of the Bluethroat to-day, with six eggs.

June 22nd. Two important observations were made today: first, there is a slight tinge of green in the birch-forests, which, up to now, have been as bare and barren as winter; and, secondly, the appearance of mosquitoes in force. From this date life became hardly tolerable on account of this plague. I found this morning by the lake-side a nest and six eggs of the Reed-Bunting, and shortly afterwards I flushed a Phalarope (*Phalaropus hyperboreus*) from her tiny nest in the grass, close to the water's edge. The legs and feet of this bird are greenish. A pair of Wood-Sandpipers evidently had a nest here, but they completely deluded us. This bird has a habit of going high up in the air and gyrating for hours in wide circles, at times shooting up another fifty or sixty feet with a delightful wild cry.

Coming down the Pulmakelf, on our return to Pulmak, we found two nests of Temminck's Stints, one containing two eggs, the other three. The latter was placed close to a Lap's log-hut, and immediately behind a dunghill adjoining the house, a few paces from the edge of the Tana. The old birds were very solicitous, sailing around with their wings set over their backs, like a butterfly, often alighting on a tree, rail, or stone, or sometimes on the ridge of the Lap hut adjoining, uttering the while a continual pretty trilling note. I frequently observed this tiny Wader in the act of nest-making, scratching a hole with its little feet, then quickly sitting down and turning its little body round to form the required depression. Then the bird jumps up, and looking at the embryo nest, pushes a dead birch-leaf with her slender beak into the tiny hole. I measured the diameter of one nest containing four eggs, and it did not amount to 2¼ inches over all. The eggs are placed small ends together, and, owing to the depth of the nest, are caused to stand nearly on end, thus taking up very little space; indeed, if they lay on their sides, the small body of this Wader could not cover them. Frequently, when at the nest, the Stints would run round and round, almost coming within arm's reach; but their quickness of flight when surprised or frightened is astonishing. They seemed to have a special liking for the dry sandy banks of the Pulmakelf close to its junction with the Tana. Here the sloping sand was sparsely overgrown with dwarf willows, and amongst the roots of the willows a coarse grass was growing, strewn with dead birch-leaves, and this the Stints seemed to prefer to any other place, although I afterwards found them breeding several hundred yards from water.

June 23rd. A pair of Ring-Plovers (*Ægialitis hiaticula*), by their excessive anxiety and solicitude, betrayed their nest and four eggs within a stone's throw of our dwelling. I had heard them nearly all night long uttering their fine hollow cry, as they flew up and down the river. I got my last Pine-Grosbeak's nest to-day, with two eggs. A Great Grey Shrike's nest, built close to the place where we had obtained a nest and seven hard-set eggs on the 14th June, now contained six fine fresh eggs, evidently a second laying. This nest was constructed almost entirely of white "ryper"-feathers, and was very warm and compact. It was placed in a birch tree standing alone in an open glade in the forest. The white feathers of the Willow-Grouse exactly resembled in colour the silvery bark of the birch tree on which it was built. We also obtained to-day a Brambling's nest with seven eggs, a Bluethroat's with seven eggs, and a Golden Plover's with four eggs, and I shot a Grey-headed Wagtail in gorgeous plumage. The heat was great to-day: the birch-forests are turning green, and the mosquitoes are a living plague.

June 24th. On our way to some distant fells to look for Dotterel, we found a Ring-Plover's nest with two eggs and two Mealy Redpole's nests, the first with five eggs, the second with newly hatched young. The latter have a very extended period of incubation, and probably have two broods in the season. Their nests are very pretty, consisting in this case of small twigs outside, then the soft downy wool of the willow-catkin, and then the snow-white lining of "ryper"-feathers. When the pale-blue eggs, with their purple spots, are laid in this, it is impossible to conceive a prettier sight. After a long climb we eventually reached the summit of a truly characteristic Lapland fjeld; nothing but a great rolling waste of reindeer-moss, thickly strewn with grey boulders and stones and occasional patches of snow. It seemed to be a real paradise for the wild and solitary Dotterel. On looking over a ridge, we saw a grey-looking bird get up and quickly disappear behind a knoll. On going to the place, there lay the "triple clutch" characteristic of the Dotterel, laid in a slight hole scratched in the reindeer-moss, without any lining. Leaving Trinus at the nest, I went after the bird, which kept running in front of me, and eventually rose, uttering a deep *croak-croak*, which I never heard afterwards. After a considerable chase I procured her, and returned to the nest. The eggs were hard-sat. During the course of to-day I saw many Dotterel. Once, when lying resting, I heard a low pipe, and on looking round saw the fine chestnut breast and white eye-streak of a Dotterel, which was sitting on a stone close to us. We did not move, and presently two others came running up. Golden Plovers swarmed, and the notes of the two could be well compared; that of the Dotterel is similar to, but not nearly so loud as, that of the Golden Plover. Once I watched a Dotterel running about, till at length it sat down, and I felt sure it was on the nest. Approaching quietly, I got within six feet of her, when I perceived that the bird had gone to roost; her eyes were shut, and she was fast asleep: it was a very pretty sight. On looking at my watch I found it was midnight.

Seated on the top of a high fell, some twelve miles from Pulmak, the view was superb. Far as the eye could reach this wild country presented a continuous series of rolling hills, clad with birch to a certain level, the intervening morasses being studded with numerous lakes and water-courses, and in the hazy distance great snow-mountains reared up into the yellow midnight sky. The sun shone brilliantly, and, with the exception of the occasional low pipe of the Plover and Dotterel, or the lively chirrup of the Snow-Bunting, all was silent. Frequently, during the course of the day, we observed small parties of six or eight Dotterel running about together; but they were wild and unapproachable, and I felt inclined to think that they could not be breeding. Some of the Dotterels which we examined were far blacker on the crown of the head than others; some had a grey crown, but, with this exception, I could note no difference in the plumage of the sexes; the legs and feet are yellow; the irides hazel. As we tramped home we remarked that the birch-leaves were now nearly full out; only three days ago not a sign of a leaf was visible!

June 25th. Temminck's Stints were just beginning to lay now, and to-day we got two nests with four fresh eggs each. I succeeded also in getting a nest and four very fine eggs of the Rough-legged Buzzard, considerably larger than any I had got before, and quite fresh. A Lap boy brought me a clutch of four fresh Whimbrel's eggs; they had a fine olive-green ground, with few other markings, entirely confined to the larger end. Rather contrary to our anticipations, a heavy thunderstorm, with vivid flashes of lightning and deluges of rain, overtook us to-day. The rain had a most invigorating effect on the birch-forests, and in the afternoon, when an almost tropical sun began to shine, the previously imperfect exfoliation of the buds was completely developed.

June 26th. We made an early start this morning and reached some high fells, some ten miles from Pulmak, before the sun's heat had time to strike us. Another thunderstorm greeted us here, and when sheltering under a boulder a male Ring-Ouzel appeared before us, the only one we saw in Finmark. I secured a pair of Dotterel here, and then we descended into a vast expanse of bog and morass. It appeared a charming place for birds; but although we tramped about for many hours in the most likely-looking spots, we never even saw or heard any thing save an occasional Golden Plover. Coming home, I secured a pair of Lapland Buntings and found several nests of Fieldfares and Mealy Redpoles with young. From a small lake in the midst of a thick forest, six Wood-Sandpipers together dashed off with the wildest screams. I had been attracted thither by cries which proved to arise from a family of young Siberian Jays (*Perisoreus infaustus*). They were hopping about from branch to branch in a sprightly manner, reminding me of the habits of a Jackdaw or Magpie. Two which I secured were fledglings, not a week out of the nest, and were clothed in a soft hairy dress, the rusty-red colour on the bastard wing and tail being conspicuous in all their movements. I never found a nest of this species, though it was evident these birds had been hatched in the immediate neighbourhood. We observed Mealy Redpoles, generally single birds, affecting the highest fell-tops to-day, and busy feeding among the boulders and reindeer-moss. In rowing up the Pulmakelf on the 27th, we found several Temminck's Stints' nests with broken eggs, caused by the rising of the river, and we also got one with four fresh eggs. A male Goosander (*Mergus merganser*) slipping slily away from an islet in a backwash of the river, arrested our attention, as we had seen him there several times before; and on landing on this island, overgrown with birch-scrub, the female Goosander slipped away from her nest, a circular hole in the sandy ground, 10 inches in diameter and 6 inches deep, thickly lined with her dusky-coloured down, containing ten cream-coloured eggs, quite fresh. The birds never came near the nest while we were there. When looking for the nest of a Greenshank which we had disturbed, we found a Willow-Warbler's nest, lined with the fine grey-mottled feathers from the back of a drake Wigeon, with seven fresh eggs.

June 28th. Many Wheatears have eggs now; their nests are made of the roots of the ling and moss, and lined with reindeer-hair. I observed a Garden-Warbler (*Sylvia hortensis*) singing quite near me to-day, and obtained a Wigeon's nest, with six fresh eggs. They were laid under a willow-bush on the banks of the Tana. House-Martins are busy nesting in the crags, and Grey-headed Wagtails are very common. We obtained two nests of the latter with fresh eggs to-day. A Lap brought me a very interesting nest of the Great Grey Shrike, constructed, as usual, of the white feathers of the Willow-Grouse; but this was overlaid with glossy Raven's feathers, and the lining, on which the single egg was deposited, consisted of reindeer-hair.

June 29th. While we slept the grass round our little house had turned green, and I was assured it would be two feet high in ten days' time, so rapid is the growth of plants and trees in the short Arctic summer. We took leave of Pulmak and our kind landlord to-day, and as we turned the bend in the river, we could not help being struck with the wondrous change that we had witnessed during our short stay. Our journey down the river was rapid, and, reaching Gulholmen about 10 P.M., we proceeded to Vagge, the station at the head of the Tana Fiord, where the steamer was to pick us up. As we crossed the fiord a White-tailed Eagle slowly flapped across in front of us, and we were rather astonished to see several hundred Mergansers in a flock at this time of the year. The "gaggling" of Geese on the flats at the mouth of the Tana gave us hopes of finding their eggs on the next day. We then visited the ground where I had seen the Red-throated Pipits (*Anthus cervinus*) on June 9th; their shrill pipe again arrested our attention, and after a long search we succeeded in finding a nest, with six slightly incubated eggs. It was placed under a birch bush, on a moss-hag, surrounded by water, and consisted of very stiff stalks of grass externally, and finer white grass for a lining, but the whole was of a distinctly rougher texture and construction than is the nest of its congener, the Meadow-Pipit. I was very careful in the identification of these eggs; and after finding the nest, we watched the female, though very sly and retiring, go on to it, when I procured her. Their habits now were more retiring than formerly, and they rarely showed themselves, seeming to prefer creeping along among the roots of the birch-scrub, whence, when unmolested, they uttered a pleasing little song, at times not unlike that of a Canary. Their eggs have suffused blotches on them, and more resemble those of the Blackcap than those of the Meadow-Pipit. Presently we flushed a Temminck's Stint from her nest and four eggs, placed far away from water; and from about the last tree in Europe came the loud cackle of a Siberian Jay, which proved to be a fledgling of the year.

On the bare fell-tops we found Snow-Buntings and a pair of Shore-Larks; from the oviduct of one of the latter I took an egg ready for laying. These birds are said by Sommerfelt, the Vadsö naturalist, to breed twice; and this would seem to corroborate his statement. They must have a considerable vertical breeding-range, for though breeding at Pulmak at the lowest possible level, they seemed here to vie with the Snow-Bunting in the altitude of their haunts. We revisited the Osprey's breeding-place, and were surprised to find a new nest, from which the bird flew at our approach, but it was empty. I believe this nest had been built by the male bird alone, for though we waited some time, we never saw more than this single Osprey. We observed to-day a large flock of Geese, some hundreds together, and at our approach they rose wild and departed, just as they had done on June 9th. Could these birds be going to breed? We were much puzzled by these *flocks* of Mergansers and Geese at this season of the year. The mosquitoes were beginning to affect us seriously now: the hissing column followed us alike on mountain-top and lowland bog; escape was impossible. In a short walk on the fells in the evening of July 1st I shot a female Ptarmigan (*Lagopus mutus*); her ovary contained fifteen undeveloped eggs. A pair of Bramblings were evidently nesting on this fell-side, though there was no plant-growth exceeding two feet in height. Next day, on a bent-grass island in the fiord, we found two nests of Temminck's Stints, each containing four eggs, and a Mealy Redpole's nest had one fresh egg. On the 3rd the Vadsö steamer was due at 8 P.M.; but as the boat did not arrive till exactly twelve hours afterwards, in strict accordance with Norwegian practice, we passed the time in watching the seals and small flocks of old male Goldeneyes in their mature plumage, the white cheek-spot being very conspicuous. On the 4th, at 8.30 A.M., the steamer 'Orion' arrived; we rounded the dreary-looking cliffs of the North Cape about midday (July 5th), and reached Hammerfest at night. On the evening of July 6th we reached Tromsö, and I spent the night watching the birds on the west side of the island. Redshanks, Oyster-catchers, and Ring-Plovers were simply swarming, and I caught young in down of each. Great flocks of Eiders, ducks and drakes with their young, with one brood of Long-tailed Ducks, Black Guillemots, Red-throated Divers, and various Gulls fairly covered the smooth surface of the fiord, and their cries were deafening in the still night air. In the woods Fieldfares, Redwings, Bramblings, and Willow-Grouse abounded, and I saw many fledged young of the three former species.

In a naturalist's shop in Tromsö were many beautiful specimens of Bar-tailed Godwits in their rich red summer plumage. My servant told me he shot them regularly during the spring migration. How strange it is that they should be so seldom found in the breeding-season! Trinus also had Grey Phalaropes, in their red summer dress, which he had shot in Spitzbergen the year before. On July 9th I visited some of the islands lying off Bodö; but the season for eggs was now nearly over, and, with the exception of one nest of Richardson's Skua, with two eggs, many of the Arctic Tern, and one nest of the Rock-Pipit with three eggs, we got nothing. A pair of Turnstones evidently had their young here. One thing which struck me as peculiar in the habits of the northern-breeding birds was the large clutches of eggs laid by such species as Bramblings, Bluethroats, Willow-Wrens, Fieldfares, Redwings, Shrikes, Wheatears, &c. Nearly all the nests contained as many as six eggs, and it was not unusual to find seven; one nest of a Redstart had eight eggs.

In concluding my rambling notes, I take this opportunity of thanking Professor Collett for giving me a copy of his excellent paper on the "Ornithology of Northern Norway." I have carefully endeavoured to convey exactly what I saw, and I may add that this paper is little more than a reproduction of what I jotted down at the actual time of observation. This, I hope, will give it freshness; and although there may not be any thing novel, I trust there may still be found something interesting, and perhaps useful, to future naturalists visiting that portion of East Finmark known as Tanadalen.

XVI.—*On a Collection of Birds from the Island of Cozumel.*

By Osbert Salvin, M.A., F.R.S., &c.

(Plate V.)

The collection of birds described below was formed by Mr. E. C. J. Devis, who, after residing for some time in Northern Yucatan, visited Cozumel before returning to England.

The centre of Cozumel is situated in about lat. 20° 30′ N., long. 86° 50′ W. The island lies off the east coast of Yucatan, a little to the southward of Cape Catoche. It is an irregular oval in shape, about twenty-five miles long and ten wide, and is separated from the mainland by a channel about ten miles wide. The geological formation appears to be similar to that of the adjoining coast, and consists of a porous limestone, through which all rain at once passes, so that there are no surface-streams or rivers anywhere in the district. The ground seems to be honeycombed, and water collects in natural wells, locally called "senotes," which have been described by all travellers in Yucatan (see Mr. G. F. Gaumer's description of them, P. Z. S. 1883, p. 438).

Historically, Cozumel is of some interest, having been first visited by Juan de Grijalva, one of the immediate predecessors of Cortés, who himself directed his ships to this island when he sailed from Cuba in the expedition which resulted in the conquest of Mexico. At that time the island appears to have been thickly populated, and extensive buildings gave evidence of an advanced civilization.

After the visit of Cortés, Cozumel appears to have again sunk into obscurity until Stephens went there in 1842 for the purpose of exploring its ruins*. Dr. S. Cabot was with this expedition, and to him we owe the beginning of our knowledge of the birds of the island, as he brought away with him two skins of a *Certhiola*, many years afterwards described as *Certhiola caboti*, the nearest relative of which is a species inhabiting the Bahama Islands.

Mr. Devis's collection contains examples of twenty-seven species; and on comparing them with the now well-known fauna of Yucatan we find, as might have been expected, a strong resemblance in the two districts as regards their birds. Still there are features in the Cozumel fauna that call for special remark; for besides the *Certhiola* just described, we find a species of the hitherto peculiarly Antillean genus *Spindalis,* also a distinct *Harporhynchus,* which has no ally nearer than in the Mexican State of Vera Cruz.

---

* 'Incidents of Travel in Yucatan,' ii. chap. xx.

The characteristic birds which this island shares with the mainland are *Vireo magister, Pyranga roseigularis, Centurus rubriventris, C. dubius,* and *Chrysotis xantholora.* Many of the remainder of the species are either widely distributed over the adjoining continent, or migratory birds visiting the island during their spring flight. A few, such as *Melanoptila glabrirostris,* are restricted to this coast, and *Columba leucocephala* and *Engyptila jamaicensis* have a wider range over the West-Indian Islands.

Mr. Devis noticed several other species which were familiar to him, but of which he did not secure specimens. Some of these were a *Mimus* (most probably *M. gilvus*), *Phœnicopterus ruber* in numbers, a Spoonbill (*Platalea ajaja*), an Ibis (*Eudocimus albus*), the Boatbill (*Cancroma cochlearia*), the Osprey (*Pandion haliaetus*), and numerous species of Heron. He further informs me that birds were generally very common.

That an island like Cozumel should contain so many distinct species is an important fact, and this, taken with the still more remarkable one that the only known species of the island of Old Providence are all distinct from their mainland or Antillean relatives, suggests that there is not an island in these seas that is not worth the visit of a naturalist. We doubt not that a harvest is to be reaped, rich in novelty, if not in numbers of species, by any one who is able and willing to undertake the task of investigating them.

1. GALEOSCOPTES CAROLINENSIS.

Muscicapa carolinensis, Linn. Syst. Nat. i. p. 328.

Galeoscoptes carolinensis, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 26.

"Found along with a species of *Mimus* amongst trees and second-growth bushes."

A well-known bird during the winter months in Yucatan and Eastern Guatemala. It is also common in the island of Cuba at the same season.

2. MELANOPTILA GLABRIROSTRIS.

Melanoptila glabrirostris, Scl. P. Z. S. 1857, p. 275; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 27, pl. 3. f. 2.

"Found on the edges of the forest, and noted as a sweet songster."

A species restricted in its range to the eastern coast of Central America from Yucatan to Omoa.

3. HARPORHYNCHUS MELANOSTOMA, sp. n.

Supra rufescens fere unicolor, alis fasciis duabus extus albis intus nigris transvittatis; subtus albus, nigro præter gulam et abdomen medium guttatus, crisso sordide rufescente, fusco guttato; rostro omnino nigro; pedibus obscure corylinis: long. tota 9·5, alæ 3·3, caudæ 4·2, rostri a rictu 1·3, tarsi 1·1.

Hab. Insula "Cozumel" dicta (*Devis*).

Mus. nostr. exempl. ii.

Obs. H. longirostri proximus, sed statura minore et mandibula omnino nigra differt.

"A common bird in the island, where it is found frequently associating with *Mimus gilvus.* It runs along the ground or flies low, living in low bushes."

This *Harporhynchus* is allied to *H. longirostris* (*cf.* Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 31), and at first sight might easily be mistaken for it. The mandible is black to the base, and the dimensions, especially the wing, are much less. Moreover there is a wide gap in the ranges of the two birds, *H. longirostris,* so far as we know at present, not occurring in any locality nearer than the State of Vera Cruz.

4. PARULA AMERICANA.

Parus americanus, Linn. Syst. Nat. i. p. 341.

Parula americana, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 119.

"Found in shady spots near the 'senotes.'"

A migratory species, reaching Yucatan, Guatemala, Cuba, &c. in winter.

5. SIURUS AURICAPILLUS.

Moticilla aurocapilla, Linn. Syst. Nat. i. p. 334.

Siurus auricapillus, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 144.

"Like *Parula americana*, found in shady places near the water-holes."

Also a migratory species, reaching the State of Panama, Cuba, and several of the Antilles in winter.

6. SETOPHAGA RUTICILLA.

Muscicapa ruticilla, Linn. Syst. Nat. i. p. 326.

Setophaga ruticilla, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 178.

"Also found in shady places near the water-holes."

A well-known migratory species, found in Cuba and most of the Antilles and on the continent as far south as Guiana and Ecuador in winter.

7. VIREO MAGISTER.

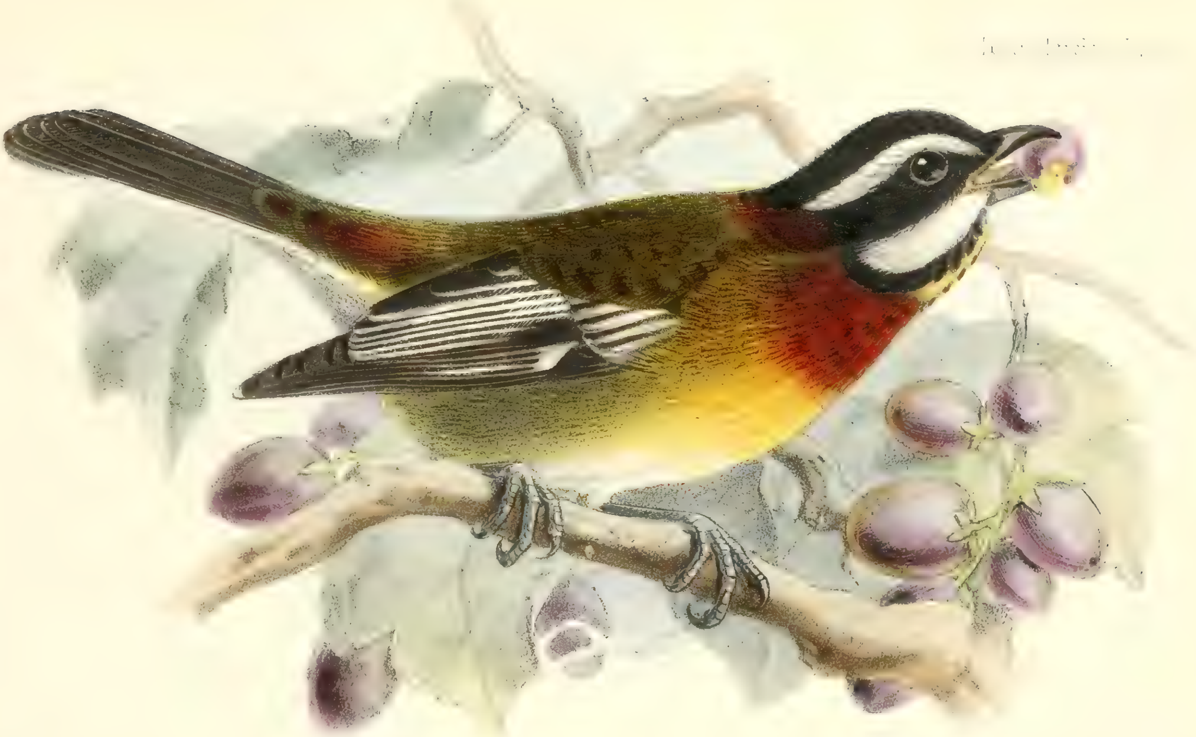
Vireosylvia magister, "Baird," Lawr. Ann. Lyc. N. Y. x. p. 20.

Vireo magister, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 191.

"Found on the edges of the woods."

The only specimens of this species previously known to me were the types in the United-States National Museum and in the Museum of the Boston Society of Natural History. Though these are not accessible now for comparison, I have little hesitation in ascribing Mr. Devis's single specimen to this distinct species.

That *V. magister* should occur in Cozumel is not improbable, as the neighbourhood of Belize was previously its only known habitat.



J. G. Keulemans del. et lith.

SPINDALIS [illegible]

8. CERTHIOLA CABOTI.

Certhiola caboti, Baird, Am. Nat. vii. p. 612; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 251, pl. 15. f. 4.

"Common, frequenting flowering bushes on the edges of the woods."

Discovered by Dr. Cabot in this island, where alone it has, as yet, been met with. Its nearest ally is *C. bahamensis,* of the Bahama Islands, and this relationship is in accordance with that of the *Spindalis* next mentioned.

9. SPINDALIS EXSUL, sp. n. (Plate V.)

Supra saturate oleaginea, cervice postica et uropygio saturate castaneis; capite nigro, superciliis elongatis, mento et striga utrinque rictali albis; vitta gulari utrinque nigro limbata et abdomine antico aurantiacis; pectore saturate castaneo, abdomine medio et crisso albis, hypochondriis virescentibus; alis nigris, secundariis et tectricibus majoribus albo limbatis, speculo alari quoque albo; cauda nigra, rectricibus duabus utrinque externis albo maculatis, duabus mediis albo intus limbatis; rostro et pedibus nigris: long. tota 6·0, alæ 3·1, caudæ 2·4, tarsi 0·7, rostri a rictu 0·7.

♀ adhuc ignota.

Hab. Insula "Cozumel" dicta (*Devis*).

Mus. nostr. exempl. i.

Obs. S. zenæ ex insulis Bahamensibus proxima, sed dorso saturate oleagineo nec nigro, pectore quoque late castaneo, manifeste distinguenda.

The discovery of a *Spindalis* in this island is of great interest, all the previously known species being of purely Antillean origin. The interest in it is further enhanced from the fact that its nearest ally is the Bahaman *S. zena,* and not its nearest neighbour, *S. pretrii,* of Cuba. It thus follows the relationship of *Certhiola caboti* to *C. bahamensis,* except that the genus *Certhiola* appears to be not represented in Cuba.

Mr. Devis tells me that this *Spindalis* is found amongst trees and bushes in shady places near the senotes or water-holes. He saw three specimens together, one of which is the bird now described.

10. Pyranga roseigularis.

Pyranga roseigularis, Cabot, Bost. Journ. N. H. v. p. 416; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 293.

"Frequents the woods, but is not common."

Of this rare species, of which a single male specimen was long the only one known, Mr. Devis sends a female. Mr. Gaumer has recently procured examples of both sexes in Northern Yucatan.

11. Phonipara pusilla.

Tiaris pusilla, Sw. Phil. Mag. new ser. i. p. 438.

Phonipara pusilla, Boucard, P. Z. S. 1883, p. 444.

"Found on the ground amongst low bushes near the edges of the woods."

A well-known bird in Northern Yucatan and Mexico, but more rare in Guatemala. The specimen is in bad condition.

12. Cyanospiza ciris.

Emberiza ciris, Linn. Syst. Nat. i. p. 313.

Cyanospiza ciris, Baird, Brew., & Ridgw. N. Am. B. ii. p. 87; Boucard, P. Z. S. 1883, p. 444.

"Frequents bushes near the edges of woods."

A common species during the winter months in Central America.

13. Cyanospiza cyanea.

Tanagra cyanea, Linn. Syst. Nat. i. p. 82.

Cyanospiza cyanea, Baird, Brew., & Ridgw. N. Am. B. ii. p. 82; Boucard, P. Z. S. 1883, p. 444.

"Observed on the ground amongst short grass."

Like *C. ciris*, common in this region during winter.

14. Coturniculus passerinus.

Fringilla passerina, Wils. Am. Orn. iii. p. 76, t. 26. f. 5.

Coturniculus passerinus, Baird, Brew., & Ridgw. N. Am. B. i. p. 553.

"Observed on the ground amongst low bushes in partly cleared places."

Like the two species of *Cyanospiza*, probably here during the winter season.

15. DOLICHONYX ORYZIVORUS.

Emberiza orizivora, Linn. Syst. Nat. i. p. 311.

Dolichonyx orizivora, Baird, Brew. & Ridgw. N. Am. B ii. p. 149; Scl. Ibis, 1884, p. 2.

"Only observed in the town of San Miguel."

This is a rare species in Central America; the only specimens that I obtained were shot on one of the cays of Lighthouse Reef, due south of Cozumel.

16. HADROSTOMUS, sp.?

"Found in the woods."

A female or young male specimen of a species which I do not at present recognize. The bill is much larger than that of *H. aglaiæ* of the adjoining coast. Nor does the bird agree with any specimens of *H. niger* that I have examined.

Without a specimen of the adult male the species to which the single example belongs cannot be satisfactorily determined.

17. ATTILA, sp.?

"Frequents bushes near clearings; rare."

A specimen without its head. It probably belongs to *A. citreopygius,* Bp., but has the flanks and rump of a darker tawny hue than any specimen in our collection. It still seems to fall within the range of variation noticeable in this form of *Attila,* at least such is my present opinion. But the difference between individuals is so great that it is possible that more than one species may be included under the name *A. citreopygius.*

18. CHLOROSTILBON CANIVETI.

Ornysmya caniveti, Less. Suppl. Ois.-Mouches, pls. 37, 38.

Chlorostilbon caniveti, Gould, Mon. Troch. v. pl. 351.

"Common."

A male, in poor condition. The tail has light-coloured tips, as in the Central-American race of this species.

19. PICUS SCALARIS.

Picus scalaris, Wagl. Isis, 1829, p. 511; Boucard, P. Z. S. 1883, p. 452.

"Rarer than the other Woodpeckers, but found with them in the uncleared woods."

Apparently common in Yucatan, where all collectors have met with it.

20. CENTURUS RUBRIVENTRIS.

Centurus rubriventris, Sw. An. in Menag. p. 354; Lawr. Ann. Lyc. N. Y. ix. p. 206.

"Tolerably common, being found along with *C. dubius* in the uncleared forest.'

A male specimen, agreeing with others sent from Northern Yucatan by Mr. Gaumer. I have no doubt as to the distinctness of *C. rubriventris* as a species, its characters being very definite, as pointed out by Swainson and Mr. Lawrence.

21. CENTURUS DUBIUS.

Picus dubius, Cabot, Pr. Bost. Soc. N. H. i. p. 164.

Centurus dubius, Boucard, P. Z. S. 1883, p. 452.

Centurus aurifrons dubius, Ridgw. Proc. U.S. Nat. Mus. iv. p. 108.

"Common all over the island."

Specimens from Cozumel agree with others from Northern Yucatan and British Honduras, the former being typical of *C. dubius*. Mr. Ridgway, in his recently published monograph, treats *C. dubius* as an imperfectly segregated form of *C. aurifrons*, or, as I have frequently called it, *C. santacruzi*. The two forms may pass into one another by insensible steps, but I have no evidence before me at present that such is the case.

22. CHRYSOTIS XANTHOLORA.

Chrysotis xantholora, Gray, Salv. Ibis, 1874, p. 327; Sclater, P. Z. S. 1875, p. 157, pl. xxvi.; Boucard, P. Z. S. 1883, p. 455.

"Common everywhere in the uncleared woods."

In Northern Yucatan this species is found along with its near ally, *C. albifrons*, and Mr. Gaumer obtained examples of both. In Cozumel, too, both may be found, but at present we can only record *C. xantholora*.

23. Asturina ruficauda.

Asturina ruficauda, Scl. & Salv. P. Z. S. 1869, p. 133; iid. Ex. Orn. pl. 88; Sharpe, Cat. B. Brit. Mus. i. p. 205; Boucard, P. Z. S. 1883, p. 456.

"Common in the woods."

Mr. Devis's specimen belongs to the form described by Mr. Ridgway as *Rupornis griseicauda.*

24. Urubitinga anthracina.

Falco anthracinus, Nitzsch, Pteryl. p. 83.

Urubitinga anthracina, Sharpe, Cat. B. Brit. Mus. i. p. 215; Boucard, P. Z. S. 1883, p. 456.

"Observed near the sea-shore, but not very common."

25. Columba leucocephala.

Columba leucocephala, Linn. S. N. i. p. 281; Gosse, B. Jam. p. 299.

"Found in the woods, and common in the high trees surrounding the senotes or water-holes."

This species is also common throughout the coral islands of the Belize coast, as well as most of the Antilles.

26. Engyptila jamaicensis.

Columba jamaicensis, Linn. Syst. Nat. i. p. 283.

Peristera jamaicensis, Gosse, B. Jam. p. 313.

Engyptila gaumeri, Lawr. Ann. N. Y. Ac. Sc. iii. p. 157.

"Tolerably common, frequenting the senotes."

I am unable to distinguish a single specimen brought by Mr. Devis from others from Jamaica, the true *E. jamaicensis.* Moreover a skin sent us by M. Boucard, who received it from Mr. Gaumer from Northern Yucatan, seems to me to belong to the same species, though Mr. Lawrence has recently described it as *Engyptila gaumeri.*

Our two skins are clearly distinct from *E. albifrons*, having a much greater extent of the cinnamon colour on the under surface of the wings, and in this respect they quite resemble *E. jamaicensis*; in the same way the metallic reflections of the neck are very much alike. These points being similar, I hesitate to admit the distinction of *E. gaumeri* upon a slight discrepancy of size and a shade of the general colour of the plumage.

27. Tringoides macularius.

Tringa macularia, Linn. Syst. Nat. i. p. 249.

Tringoides macularius, Baird, Brew., & Ridgw. Water-B. of N. Am. i. p. 301.

"Observed amongst the rocks on the sea-shore."

Mr. Devis's specimen is an adult bird in spotted plumage, and was shot in April.

XVII.—*On a small Collection of Birds from Korea.*

By H. B. Tristram, D.D., F.R.S.

I have received a small collection of birds made by Lieut. G. Gunn, R.N., who has been for a few months employed in H.M.S. 'Flying Fish,' on the survey of the coast of Korea. Lieut. Gunn informs me he has never been able to get inland beyond the shore, and that the birds were all obtained at the water's edge or on board ship. Though there is nothing novel in the collection, which contains only eight specimens of as many species, yet, as absolutely nothing is known of the avifauna of Korea, I have thought it might not be without interest to give a list of what Lieut. Gunn has procured. The specimens are as follows:—

1. Asio otus (L.). ♀.

2. Scops stictonotus, Sharpe.

An unusually dark-coloured specimen.

3. Caprimulgus jotaka, Temm. & Schl. ♀.

Also very dark-coloured.

4. Cecropis japonica (Temm. & Schl.). ♂.

5. Nemoricola indica (Gm.).

I am not aware that this bird (shot in July) has been recorded from this region. It no way differs in plumage from Indian winter-shot specimens, and was obtained on a sand spit.

6. HÆMATOPUS OSCULANS, Swinhoe. ♂.

7. TOTANUS GLOTTIS (L.).

8. LARUS CRASSIROSTRIS, Vieill.
In the blackish-brown plumage of the first year.

XVIII.—*A List of the Birds obtained by Mr. Henry Whitely in British Guiana.* By OSBERT SALVIN, M.A., F.R.S., &c.

THE following list of Birds is based on a series of collections made by Mr. Henry Whitely in British Guiana during a period of five years (1879–84). Mr. Whitely's travels extended over a considerable extent of country. In his last expedition he penetrated into the mountainous region of Roraima, and ascended to an elevation of upwards of 7000 feet on the slopes of that mountain.

The first portion of his stay Mr. Whitely passed at Bartica Grove Mission, situated on the Essequibo River, but little above the sea-level. He then made an expedition to the Mazaruni River, passing some time at a place called Camacusa, and visiting the Merumé Mountains, which lie on the south bank of that river. His next expeditions were into the Roraima district, which he explored on two occasions. During the last of these he ascended to the foot of the cliffs which form so remarkable a feature of the mountain of Roraima. This last expedition was fully described by Mr. Whitely himself in a paper published in the 'Proceedings of the Royal Geographical Society' (vol. vi. p. 452) in August last; a map of the district accompanying this paper shows Mr. Whitely's route and the position of most of the localities mentioned in the following list:—

Atapurau River.—A stream rising in Mount Eleutewer, and flowing into the Carimang River, an affluent of the Mazaruni River.

Bartica Grove.—A station on the Essequibo River, near its mouth, and almost at the sea-level.

Camacusa.—A hamlet on the south bank of the Mazaruni River, in lat. 6° N., long. 60° W.

Kukenam.—One of the mountains of the Roraima series, of similar shape and elevation.

Merumé Mountains.—A group of mountains of about 2000 feet elevation, lying to the N.E. of Roraima, in a bend of the Mazaruni River, which rises on their southern slope.

Roraima.—A singular mountain, which reaches an elevation of upwards of 8000 feet, the upper 1500 feet or so consisting of perpendicular cliff rising out of a forest-clad talus of a similar height. The country surrounding this mountain consists of undulating savanas with patches of forest. Until quite recently the summit of Roraima was supposed to be inaccessible, but in the early part of February last Mr. Everard F. im Thurm reached the top; the full details of his journey have not yet reached this country.

Yuruani River.—Rises in Kukenam and flows south-westwards, joining the Caroni and ultimately the Orinoco.

At the conclusion of this list of Birds I propose to give a summary of its contents, and some remarks on the general relationship of the avifauna of the district to that of the surrounding regions.

The only authority on the birds of British Guiana is Richard Schomburgk, who explored the country in 1840–44, and an accouut of whose collections were published in his 'Reisen in Britisch-Guiana' in 1848. The birds, which were determined by Prof. Cabanis, numbered 418 species, many of which were then described for the first time. I have, in the following catalogue of Mr. Whitely's birds, in all cases referred to this work; and in order to render this list of British Guianan birds more complete, I have added the names of the species mentioned by Schomburgk, but not contained in Mr. Whitely's series. These are distinguished by an asterisk prefixed to them.

1. Turdus fuscescens.

Turdus fuscescens, Steph. Shaw's Zool. x. p. 182; Baird, Brew., & Ridgw. N. Am. B. i. p. 9.

Camacusa, 12th April, 1882.

This Thrush has already been found at Santarem on the Amazons and at S. Vicente, in Matogrosso, and also in the State of Panama.

2. TURDUS USTULATUS.

Turdus ustulatus, Nutt. Man. i. p. 400.

Turdus swainsoni, var. *ustulatus,* Baird, Brew., & Ridgw. N. Am. B. i. p. 16.

Roraima, 6th December, 1881 (♀).

Agrees with Central-American specimens of this race and with one from the Mexican Boundary Survey (1859).

3. TURDUS ALICIÆ.

Turdus aliciæ, Baird, B. N. Am. p. 217, pl. 81. f. 2; Baird, Brew., & Ridgw. N. Am. B. i. p. 11.

Bartica Grove, 2nd Feb., 1880 (♂); Camacusa, 29th March, 1882 (♂).

Two specimens, agreeing with those sent us as *T. aliciæ* from the United States. This Thrush, though noticed in Central America and Colombia, and as far south as Chamicuros in Eastern Peru, has not previously been seen so far east in South America.

4. TURDUS PHÆOPYGUS.

Turdus phæopygus, Cab. in Schomb. Guiana, iii. p. 666; Seebohm, Cat. B. Brit. Mus. v. p. 208.

Bartica Grove, Camacusa, Merumé Mountains, Roraima.

Apparently a common resident species. Mr. Whitely's specimens were obtained at all seasons of the year, and present a considerable amount of variation in the tint of the brown upper surface.

5. TURDUS MURINUS, sp. n.

Supra saturate murinus fere unicolor; subtus pectore et hypochondriis dorso paulo pallidioribus, gula et abdomine medio albis, illa murino striolata; crisso albo, subalaribus vix cinnamomeo tinctis; rostro omnino nigro; pedibus obscure corylinis: long. tota 9·0, alæ 4·5, caudæ 3·9, rostri a rictu 1·0, tarsi 1·3.

♀. Mari similis, sed pectore et hypochondriis paulò brunnescentioribus.

Obs. T. ignobili similis, sed pectore clare murino, gula magis distincte striata, et abdomine medio albicantiore distinguendus.

Merumé Mountains, Roraima (3000–5000 feet), British Guiana (*H. Whitely*).

Mr. Whitely's collections from the higher parts of British Guiana contained many specimens of this Thrush, which were for some time considered to be indistinguishable from *T. ignobilis* of Colombia. They, however, present the differences pointed out above, and are so constant in their coloration that I venture to separate them under a distinct name. As they are inhabitants of distinct mountain-ranges it is improbable that *T. murinus* and *T. ignobilis* meet in any common locality.

6. TURDUS ALBIVENTRIS.

Turdus albiventris, Spix; Cab. in Schomb. Guiana, iii. p. 666; Seebohm, Cat. B. Brit. Mus. v. p. 216.

Roraima (3000–4000 feet).

7. TURDUS GYMNOPHTHALMUS.

Turdus gymnophthalmus, Cab. in Schomb. Guiana, iii. p. 665; Seebohm, Cat. B. Brit. Mus. v. p. 212.

Roraima (3500 feet).

8. TURDUS FUMIGATUS.

Turdus fumigatus, Licht.; Cab. in Schomb. Guiana, iii. p. 665; Seebohm, Cat. B. Brit. Mus. v. p. 216.

Bartica Grove, Camacusa.

9. TURDUS RORAIMÆ.

Turdus roraimæ, Salv. & Godm. Ibis, 1884, p. 443.

Roraima (5000–6000 feet).

Mr. Whitely obtained a good series of this interesting species, including a young bird able to fly, but still in its spotted first plumage, which was killed on 12th September.

10. TURDUS FLAVIPES.

Turdus flavipes, Vieill. N. Dict. d'Hist. N. xx. p. 217.

Turdus carbonarius, Licht. Verz. Doubl. p. 37; Seebohm, Cat. B. Brit. Mus. v. p. 253.

Roraima (3500–6000 feet).

11. TURDUS LEUCOPS.

Turdus leucops, Tacz. P. Z. S. 1877, p. 331.

Merula leucops, Seebohm, Cat. B. Brit. Mus. v. p. 241.

Merumé Mountains, Roraima.

These specimens agree fairly well with others from Ecuador; but I notice that the bill of the males is rather smaller, and that the under tail-coverts of the female have much less white.

Young males assuming their adult dress were obtained on the 11th and 24th June, 1881.

12. MIMUS GILVUS.

Turdus gilvus, Vieill. Ois. Am. Sept. ii. p. 15, t. 68 bis.

Mimus gilvus, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 36; Sharpe, Cat. B. Brit. Mus. vi. p. 350.

Roraima (2700–3700 feet).

A young bird with spotted breast was obtained on 10th April, 1883.

13. CICHLOPSIS GULARIS.

Cichlopsis gularis, Salv. & Godm. Ibis, 1882, p. 76; Sharpe, Cat. B. Brit. Mus. vi. p. 378.

Merumé Mountains, Roraima (3500 feet).

14. *DONACOBIUS ATRICAPILLUS.

Turdus atricapilla, Linn. Syst. Nat. i. p. 295.

Donacobius atricapillus, Cab. in Schomb. Guiana, iii. p. 674; Sharpe, Cat. B. Brit. Mus. vi. p. 364.

Not represented in Mr. Whitely's collection.

15. *CAMPYLORHYNCHUS BICOLOR.

Campylorhynchus griseus, Cab. in Schomb. Guiana, iii. p. 674?

Campylorhynchus bicolor, Pelz. Ibis, 1875, p. 330; Sharpe, Cat. B. Brit. Mus. vi. p. 187.

There is, according to Mr. Sharpe, a specimen of this bird in the British Museum obtained from Schomburgk. This renders it extremely probable that the bird called *C. griseus,* Sw., by Cabanis should be referred to the same species. There are no specimens of *Campylorhynchus* in Mr. Whitely's collection.

16. Cyphorhinus musicus.

Formicarius musicus, Bodd. Tabl. Pl. Enl. p. 44.

Cyphorhinus musicus, Sharpe, Cat. B. Brit. Mus. vi. p. 290.

Cyphorhinus cantans, Cab. in Schomb. Guiana, iii. p. 673 (ex Gm.).

Upper Pomeroon and Wenamu Rivers (*Schomburgk*).

Merumé Mountains, Camacusa, Atapurau River.

A young bird was obtained on the Atapurau River on 30th January, 1882; the nuchal spots are very indistinct and the abdomen rich brown without any admixture of grey.

17. Microcerculus bambla.

Formicarius bambla, Bodd. Tabl. Pl. Enl. p. 44.

Microcerculus bambla, Sharpe, Cat. B. Brit. Mus. vi. p. 296.

Bartica Grove, Merumé Mountains, Camacusa.

A young bird from Merumé Mountains (28th June) has the transverse black marks very conspicuous and the wing-band tinged with fulvous. A still younger bird (Merumé Mountains, 20th July) is nearly uniform dark brown, with indistinct dark cross bands and no wing-band at all.

18. Microcerculus ustulatus.

Microcerculus ustulatus, Salv. & Godm. Ibis, 1883, p. 204, pl. 9. f. 2.

Roraima (3500–5000 ft.).

The young birds (August and October) of this species have the under plumage clearly marked with black cross bands, and there are also indications of similar bands above.

19. Henicorhina leucosticta.

Cyphorhinus leucostictus, Cab. in Schomb. Guiana, iii. p. 673.

Henicorhina leucosticta, Sharpe, Cat. B. Brit. Mus. vi. p. 287.

Bartica Grove, Merumé Mountains, Camacusa.

All these birds have black heads, a character distinguishing them from the Central-American species, and they were rightly separated by Mr. Sharpe. Several of our specimens have white feathers on the occiput, but these are not universally found and are not confined to one sex. A young bird was obtained on 22nd August at Bartica Grove.

20. *THRYOPHILUS LEUCOTIS.

Thryophilus leucotis, Lafr. Rev. Zool. 1845, p. 338.

Thryophilus leucotis, Sharpe, Cat. B. Brit. Mus. vi. p. 207.

Thryothorus albipectus, Cab. in Schomb. Guiana, iii. p. 673.

Not represented in Mr. Whitely's collections.

21. THRYOTHORUS CORAYA.

Turdus coraya, Gm. Syst. Nat. i. p. 825.

Thryothorus coraya, Cab. in Schomb. Guiana, iii. p. 674; Sharpe, Cat. B. Brit. Mus. vi. p. 234.

Bartica Grove, Merumé Mountains, Roraima (3500–6000 ft.).

Young birds of this Wren were obtained in the Merumé Mountains in June and at Roraima in August and September.

22. THRYOTHORUS RUFULUS.

Troglodytes rufulus, Cab. in Schomb. Guiana, iii. p. 672.

Roraima (5000–6000 ft.) (*Schomburgk; Whitely*).

Mr. Whitely obtained a good series of this species, which does not seem to have been met with since Schomburgk's expedition. Mr. Sharpe (Cat. B. Brit. Mus. vi. p. 258) has applied this name to the Guiana form of the next species; but the specimens we now possess show that this view is quite erroneous. The present species is quite distinct and has no near allies, unless it be the island forms *T. martinicensis* &c.

23. TROGLODYTES FURVUS.

Brown Warbler, Brown, New Ill. Zool. p. 68, pl. 68. f. 2.

Motacilla furva, Gm. Syst. Nat. i. p. 994.

Troglodytes furvus, Scl. Cat. Am. B. p. 23, et auctt. plurr.

Thryothorus platensis, Cab. in Schomb. Guiana, iii. p. 673 (ex Neuw.).

Troglodytes rufulus, Sharpe, Cat. B. Brit. Mus. vi. p. 258 (nec Cab.).

Bartica Grove, Roraima (3500–4000 ft.).

Mr. Sharpe expresses his inability to identify the *Motacilla furva* of Gmelin with any known species of Wren. I have again looked into the question, and can only say that it seems to me that this name is specially applicable to this Guiana bird. The description is certainly brief, but not inaccurate, and Brown's figure suits the bird remarkably well. The locality, too, "Surinam," given for *T. furvus*, makes the matter more sure.

24. CISTOTHORUS ALTICOLA.

Cistothorus alticola, Salv. & Godm. Ibis, 1883, p. 204.

Roraima (3500 feet).

25. ANTHUS RUFUS.

Alauda rufa, Gm. Syst. Nat. i. p. 798.

Anthus rufus, Scl. Ibis, 1878, p. 360; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 108.

Merumé Mountains, Roraima (3500 ft.).

26. SIURUS NOVEBORACENSIS.

Henicocichla noveboracensis, Cab. in Schomb. Guiana, iii. p. 666.

Siurus noveboracensis, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 145.

Bartica Grove, Roraima.

27. PARULA PITIAYUMI.

Sylvia pitiayumi, Vieill. N. Dict. Hist. Nat. ii. p. 276.

Parula pitiayumi, Scl. Cat. Am. B. p. 26.

Roraima (5000–6000 ft.).

28. DENDRŒCA STRIATA.

Muscicapa striata, Forst. Phil. Trans. lxii. pp. 383, 428.

Dendrœca striata, Baird, Brew., & Ridgw. N.-Am. B. i. p. 248.

Roraima (3500 ft.).

29. DENDRŒCA ÆSTIVA.

Motacilla æstiva, Gm. Syst. Nat. i. p. 996.

Dendrœca æstiva, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 124.

Bartica Grove.

30. GEOTHLYPIS ÆQUINOCTIALIS.

Motacilla æquinoctialis, Gm. Syst. Nat. i. p. 972.

Geothlypis æquinoctialis, Salv. Ibis, 1872, p. 147.

Geothlypis velata, Cab. in Schomb. Guiana, iii. p. 666 (nec Vieill.).

Yuruani River.

31. BASILEUTERUS AURICAPILLUS.

Setophaga auricapilla, Sw. An. in Menag. p. 293.

Basileuterus auricapillus, Berlepsch, Ibis, 1881, p. 240.

Basileuterus vermivorus, Vieill.; Cab. in Schomb. Guiana, iii. p. 667; Scl. Cat. Am. B. p. 34.

Roraima (*Schomburgk; Whitely*).

32. BASILEUTERUS RORAIMÆ.

Basileuterus roraimæ, Sharpe, Cat. B. Brit. Mus. x. p. 392

Merumé Mountains, Roraima (3500–6000 ft.).

33. BASILEUTERUS MESOLEUCUS.

Basileuterus mesoleucus, Scl. P. Z. S. 1865, p. 286, pl. 9. f. 1.

Camacusa.

34. SETOPHAGA RUTICILLA.

Muscicapa ruticilla, Linn. Syst. Nat. i. p. 326.

Setophaga ruticilla, Cab. in Schomb. Guiana, iii. p. 667; Salv. Ibis, 1878, p. 305; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 178.

Roraima (*Schomburgk; Whitely*).

35. SETOPHAGA VERTICALIS.

Setophaga verticalis, d'Orb. & Lafr. Syn. Av. p. 50; Salv. Ibis, 1878, p. 311.

Roraima (3500–5000 ft.).

The presence of *S. verticalis* has been noticed in Venezuela, but not previously in the mountains of Guiana.

36. SETOPHAGA CASTANEOCAPILLA.

Setophaga castaneocapilla, Cab. in Schomb. Guiana, iii. p. 667; Salv. Ibis, 1878, p. 313.

Roraima (5000–6000 ft.) (*Schomburgk; Whitely*).

Many specimens in Mr. Whitely's last collection. These all differ from *S. brunneiceps* in the characters pointed out by me when I had the type (in poor condition) before me, while compiling my synopsis of the genus *Setophaga*.

37. GRANATELLUS PELZELNI.

Granatellus pelzelni, Scl. P. Z. S. 1864, p. 606, pl. 37. f. 1; Pelz. Orn. Bras. p. 216.

Camacusa.

Natterer, the discoverer of this beautiful and rare bird, obtained his specimens on the banks of the Madeira River. Mr. Whitely has sent us two examples.

38. VIREO CALIDRIS.

Motacilla calidris, Linn. Syst. Nat. i. p. 329.

Vireo calidris, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 186.

Bartica Grove, Camacusa.

39. VIREO AGILIS.

Lanius agilis, Licht. Verz. Doubl. p. 49.

Vireosylvia agilis, Scl. Cat. Am. B. p. 43.

Bartica Grove, Camacusa, Roraima (3500 ft.).

40. HYLOPHILUS THORACICUS.

Hylophilus thoracicus, Temm. Pl. Col. 173. f. 1; Scl. Ibis, 1881, p. 297.

Bartica Grove, Camacusa.

41. HYLOPHILUS MUSCICAPINUS.

Hylophilus muscicapinus, Scl. & Salv. Nomencl. Av. Neotr. p. 156; Scl. Ibis, 1881, p. 299.

Bartica Grove.

42. HYLOPHILUS SCLATERI.

Hylophilus sclateri, Salv. & Godm. Ibis, 1883, p. 205.

Camacusa, Roraima (3500–6000 ft.).

43. HYLOPHILUS LUTEIFRONS.

Hylophilus luteifrons, Scl. Ibis, 1883, p. 308.

Bartica Grove, Merumé Mountains, Camacusa.

44. VIREOLANIUS LEUCOTIS.

Malaconotus leucotis, Sw. An. in Menag. p. 341.

Vireolanius leucotis, Salv. Ibis, 1878, p. 443, t. 11; Salv. & Godm. Ibis, 1882, p. 77.

Bartica Grove, Merumé Mountains.

45. CYCLORHIS GUIANENSIS.

Tanagra guianensis, Gm. Syst. Nat. i. p. 893.

Cyclorhis guianensis, Scl. Cat. Am. B. p. 45.

Roraima (3500 ft.).

46. *PROGNE PURPUREA.

Hirundo purpurea, Linn. Syst. Nat. i. p. 344.

Progne purpurea, Cab. in Schomb. Guiana, iii. p. 671; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 221.

Not noticed by Mr. Whitely.

47. PROGNE CHALYBEA.

Hirundo chalybea, Gm. Syst. Nat. i. p. 224.

Progne chalybea, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 244.

Bartica Grove.

48. *PROGNE TAPERA.

Hirundo tapera, Linn. Syst. Nat. i. p. 345.

Progne tapera, Cab. in Schomb. Guiana, iii. p. 672; Baird, Rev. Am. B. i. p. 286.

Not observed by Mr. Whitely.

49. HIRUNDO ERYTHROGASTER.

Hirundo erythrogaster, Bodd. Tabl. Pl. Enl. p. 45; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 232.

Bartica Grove, Roraima (3500 ft.).

50. TACHYCINETA ALBIVENTRIS.

Hirundo albiventris, Bodd. Tabl. Pl. Enl. p. 32; Scl. Cat. Am. B. p. 41; Baird, Rev. Am. B. i. p. 302.

Hirundo leucoptera, Cab. in Schomb. Guiana, iii. p. 672.

Bartica Grove, Camacusa.

51. ATTICORA FASCIATA.

Hirundo fasciata, Gm. Syst. Nat. i. p. 1022.

Atticora fasciata, Scl. Cat. Am. B. p. 39; Baird, Rev. Am. B. i. p. 306.

Merumé Mountains, Atapurau River.

52. ATTICORA CYANOLEUCA.

Hirundo cyanoleuca, Vieill. N. Dict. d'Hist. Nat. xiv. p. 509.

Atticora cyanoleuca, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 229.

Camacusa, Roraima (3500 ft.).

53. *ATTICORA MELANOLEUCA.

Hirundo melanoleuca, Wied, Beitr. iii. p. 371; Cab. in Schomb. Guiana, iii. p. 672.

Atticora melanoleuca, Pelz. Orn. Bras. p. 18.

Not in Mr. Whitely's collections.

54. COTILE FUCATA.

Hirundo fucata, Temm. Pl. Col. 161. f. 1.

Atticora fucata, Baird, Rev. Am. B. i. p. 308.

Roraima (3500 ft.).

55. COTILE RIPARIA.

Hirundo riparia, Linn. Syst. Nat. i. p. 344.

Cotile riparia, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 240.

Bartica Grove.

56. STELGIDOPTERYX RUFICOLLIS.

Hirundo ruficollis, Vieill. N. Dict. d'Hist. N. xiv. p. 523.

Stelgidopteryx ruficollis, Baird, Rev. Am. B. i. p. 315.

Roraima (3500 ft.).

57. DIGLOSSA MAJOR.

Diglossa major, Cab. in Schomb. Guiana, iii. p. 676; Scl. Ibis, 1875, p. 214.

Roraima (5000–6500 ft.) (*Schomburgk; Whitely*).

58. CHLOROPHANES SPIZA.

Certhia spiza, Linn. Syst. Nat. i. p. 186.

Dacnis spiza, Cab. in Schomb. Guiana, iii. p. 675.

Chlorophanes spiza, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 247.

Bartica Grove, Merumé Mountains, Roraima.

59. DACNIS CAYANA.

Motacilla cayana, Linn. Syst. Nat. i. p. 336.

Dacnis cayana, Cab. in Schomb. Guiana, iii. p. 675; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 244.

Dacnis cyanocephala, Cab. *l. s. c.* (♀).

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.).

60. DACNIS ANGELICA.

Dacnis angelica, De Filippi; Bp. Atti Sc. Ital. 1845, p. 404; Salv. Cat. Strickl. Coll. p. 176.

Bartica Grove.

61. CŒREBA CYANEA.

Certhia cyanea, Linn. Syst. Nat. i. p. 188.

Arbelorhina cyanea, Cab. in Schomb. Guiana, iii. p. 675.

Cœreba cyanea, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 348.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.).

62. CŒREBA CÆRULEA.

Certhia cærulea, Linn. Syst. Nat. i. p. 188.

Arbelorhina cærulea, Cab. in Schomb. Guiana, iii. p. 675.

Cœreba cærulea, Scl. Cat. Am. B. p. 53.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.).

63. CERTHIOLA CHLOROPYGA.

Certhiola flaveola, Cab. in Schomb. Guiana, iii. p. 675.

Certhiola chloropyga, Cab. Mus. Hein. i. p. 97.

Bartica Grove, Camacusa, Atapurau River, Roraima (3500–4000 ft.).

64. PROCNIAS TERSA.

Ampelis tersa, Linn. Syst. Nat. i. p. 298.

Procnias tersa, Scl. Cat. Am. B. p. 54.

Procnias ventralis, Cab. in Schomb. Guiana, iii. p. 671.
Roraima (3500 ft.).

65. CHLOROPHONIA RORAIMÆ.
Chlorophonia roraimæ, Salv. & Godm. Ibis, 1884, p. 444.
Roraima (3500–6000 ft.).

66. EUPHONIA NICRICOLLIS.
Tanagra nigricollis, Vieill. N. Dict. d'Hist. N. xxxii. p. 412.
Euphonia nigricollis, Scl. Cat. Am. B. p. 56.
Roraima (3500 ft.).

67. EUPHONIA MINUTA.
Euphonia minuta, Cab. in Schomb. Guiana, iii. p. 671; Scl. Cat. Am. B. p. 57; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 258.
Bartica Grove, Camacusa.

68. EUPHONIA XANTHOGASTRA.
Euphonia xanthogastra, Sundev. Vet.-Ak. Handl. 1833, pl. 10. f. 1; Scl. Cat. Am. B. p. 57.
Merumé Mountains, Camacusa, Atapurau River.

69. EUPHONIA VIOLACEA.
Tanagra violacea, Linn. Syst. Nat. i. p. 315.
Euphona violacea, Cab. in Schomb. Guiana, iii. p. 670; Scl. Cat. Am. B. p. 58.
Bartica Grove, Roraima (3000–3700 ft.).

70. EUPHONIA CAYANA.
Tanagra cayana, Linn. Syst. Nat. i. p. 314.
Euphonia cayana, Scl. Cat. Am. B. i. p. 59.
Euphona cayennensis, Cab. in Schomb. Guiana, iii. p. 671.
Bartica Grove, Camacusa.

71. EUPHONIA PLUMBEA.
Euphonia plumbea, DuBus, Bull. Ac. Belg. xxii. p. 153; Pelz. Orn. Bras. p. 205.
Bartica Grove, Merumé Mountains, Roraima (3500 ft.).

Natterer's specimens of this rare species were obtained at Barra do Rio Negro and Marabitanas.

72. TANAGRELLA VELIA.

Motacilla velia, Linn. Syst. Nat. i. p. 336.

Hypothlypis velia, Cab. in Schomb. Guiana, iii. p. 667.

Tanagrella velia, Scl. Cat. Am. B. p. 60.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.).

73. CALLISTE TATAO.

Tanagra tatao, Linn. Syst. Nat. i. p. 315.

Callospiza tatao, Cab. in Schomb. Guiana, iii. p. 669.

Calliste tatao, Scl. Mon. Call. p. 1, pl. 1. f. 1.

Merumé Mountains, Roraima (3000–4000 ft.).

74. CALLISTE PUNCTATA.

Tanagra punctata, Linn. Syst. Nat. i. p. 316.

Calliste punctata, Scl. Mon. Call. p. 55.

Bartica Grove, Merumé Mountains, Roraima (3500 ft.).

75. CALLISTE GUTTATA.

Calliste guttata, Cab. Mus. Hein. i. p. 26; Scl. Mon. Call. p. 21, pl. 10; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 267.

Callospiza punctata, Cab. in Schomb. Guiana, iii. p. 669 (nec Linn. apud Sclater).

Roraima (3500–4000 ft.).

76. CALLISTE XANTHOGASTRA.

Calliste xanthogastra, Scl. Contr. Orn. 1851, pp. 23, 25; Mon. Call. p. 23, pl. 11.

Roraima (6000 ft.), Kukenam (5000 ft.).

77. CALLISTE CAYANA.

Tanagra cayana, Linn. Syst. Nat. i. p. 315.

Callospiza cayana, Cab. in Schomb. Guiana, iii. p. 670.

Calliste cayana, Scl. Mon. Call. p. 41, pl. 19.

Merumé Mountains, Roraima (3500–4000 ft.).

78. CALLISTE GYROLA.

Tanagra gyrola, Linn. Syst. Nat. i. p. 315.

Callospiza gyrola, Cab. in Schomb. Guiana, iii. p. 669.

Calliste gyrola, Scl. Mon. Call. p. 55, pl. 25.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500–4000 ft.).

79. CALLISTE FLAVIVENTRIS.

Tanagra flaviventris, Vieill. N. Dict. d'Hist. N. xxxii. p. 411.

Calliste flaviventris, Scl. Mon. Call. p. 63, pl. 29.

Callospiza mexicana, Cab. in Schomb. Guiana, iii. p. 670.

Bartica Grove.

80. CALLISTE WHITELYI.

Calliste whitelyi, Salv. & Godm. Ibis, 1884, p. 445, pl. 13.

Roraima (5000–6500 ft.).

81. CALLISTE NIGRICINCTA.

Aglaia nigrocincta, Bp. P. Z. S. 1837, p. 121.

Calliste nigricincta, Scl. Mon. Call. p. 85, pl. 37.

Roraima (3500 ft.).

82. TANAGRA EPISCOPUS.

Tanagra episcopus, Linn.; Cab. in Schomb. Guiana, iii. p. 670.

Tanagra archiepiscopus, Cab. *l. c.*

Tanagra serioptera, Cab. *l. c.*

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3000–3500 ft.).

83. TANAGRA PALMARUM.

Tanagra palmarum, Wied, Reise n. Bras. ii. p. 76; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 279.

Thraupis olivascens (Licht.), Cab. in Schomb. Guiana, iii. p. 670.

Bartica Grove, Roraima (3000–4000 ft.).

84. RHAMPHOCŒLUS JACAPA.

Tanagra jacapa, Linn. Syst. Nat. i. p. 313.

Rhamphocœlus jacapa, Scl. P. Z. S. 1856, p. 128.

Rhamphopis atrococcineus, Cab. in Schomb. Guiana, iii. p. 668.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3000–3500 ft.).

85. PYRANGA ÆSTIVA.

Tanagra æstiva, Gm. Syst. Nat. i. p. 889.

Pyranga æstiva, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 289.

Roraima (3500 ft.).

86. PYRANGA HÆMALEA.

Phœnicosoma azaræ, Cab. in Schomb. Guiana, iii. p. 668.

Pyranga hæmalea, Salv. & Godm. Ibis, 1883, p. 205.

Roraima (3500 ft.).

87. PYRANGA ARDENS.

Phœnisoma ardens, Tsch. in Arch. f. Naturg. 1844, i. p. 207.

Pyranga ardens, Scl. P. Z. S. 1856, p. 126.

Roraima (5000 ft.).

88. ORTHOGONYS CYANICTERUS.

Pyranga cyanicterus, Vieill. N. Dict. d'Hist. N. xxviii. p. 290.

Orthogonys cyanicterus, Scl. P. Z. S. 1856, p. 122.

Cyanicterus venustus, Bp. Consp. Av. i. p. 240.

Merumé Mountains.

89. LANIO ATRICAPILLUS.

Tanagra atricapilla, Gm. Syst. Nat. i. p. 898.

Pogonothraupis atricapillus, Cab. in Schomb. Guiana, iii. p. 669.

Lanio atricapillus, Scl. P. Z. S. 1856, p. 118.

Bartica Grove, Merumé Mountains, Atapurau River.

90. TACHYPHONUS MELALEUCUS.

Oriolus melaleucus, Sparrm. Mus. Carls. pl. 31.

Tachyphonus melaleucus, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 309.

Tachyphonus nigerrimus (Gm.), Cab. in Schomb. Guiana, iii. p. 669.

Bartica Grove.

91. TACHYPHONUS LUCTUOSUS.

Tachyphonus luctuosus, d'Orb. & Lafr. Syn. Av. i. p. 29; Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 310.

Bartica Grove.

92. TACHYPHONUS PHŒNICEUS.

Tachyphonus phœniceus, Sw. An. in Menag. p. 311; Scl. & Salv. Ex. Orn. p. 65, pl. 33.

Merumé Mountains, Roraima (3500–5000 ft.).

93. TACHYPHONUS CRISTATUS.

Tanagra cristata, Gm. Syst. Nat. i. p. 898.

Tachyphonus cristatus, Cab. in Schomb. Guiana, iii. p. 668; Scl. P. Z. S. 1856, p. 115.

Tachyphonus intercedens, Berlepsch, Ibis, 1880, p. 113.

Bartica Grove, Atapurau River.

This is the true *T. intercedens* of Count Berlepsch, the male having the crown a shade yellower than in Cayenne examples of *T. cristatus*, but the difference is quite trivial. Brazilian specimens, on the other hand, have the crown of a much deeper and purer red. *T. cristatus* (verus) passes up the Amazons valley to Eastern Ecuador.

94. TACHYPHONUS SURINAMUS.

Turdus surinamus, Linn. Syst. Nat. i. p. 297.

Tachyphonus surinamus, Scl. P. Z. S. 1856, p. 114.

Tachyphonus ochropygos, Cab. in Schomb. Guiana, iii. p. 668.

Bartica Grove, Merumé Mountains, Camacusa, Atapurau River.

95. NEMOSIA GUIRA.

Motacilla guira, Linn. Syst. Nat. i. p. 335.

Nemosia guira, Scl. P. Z. S. 1856, p. 109.

Merumé Mountains, Roraima (3000–4000 ft.).

96. BUARREMON PERSONATUS.

Arremon personatus, Cab. in Schomb. Guiana, iii. p. 678.

Buarremon personatus, Scl. P. Z. S. 1856, p. 89.

Roraima (4000–6000 ft.).

97. ARREMON SILENS.

Tanagra silens, Bodd. Tabl. Pl. Enl. p. 46.

Arremon silens, Cab. in Schomb. Guiana, iii. p. 677; Scl. P. Z. S. 1856, p. 80.

Bartica Grove, Merumé Mountains, Camacusa, Atapurau River, Roraima (3500–4000 ft.).

98. CISSOPIS MEDIA.

Cissopis minor, Tsch., Cab. in Schomb. Guiana, iii. p. 677.

Bethylus media, Bp. Consp. Av. i. p. 491.

Cissopis media, Scl. P. Z. S. 1856, p. 79.

Bartica Grove.

99. SALTATOR MAGNUS.

Tanagra magna, Gm. Syst. Nat. i. p. 890.

Saltator magnus, Cab. in Schomb. Guiana, iii. p. 676; Scl. P. Z. S. 1856, p. 70.

Bartica Grove, Roraima (3500 ft.).

100. *SALTATOR CÆRULESCENS.

Saltator cærulescens, Cab. in Schomb. Guiana, iii. p. 676.

British Guiana.

101. *SALTATOR OLIVASCENS.

Saltator olivascens, Cab. in Schomb. Guiana, iii. p. 676.

Roraima.

102. ORCHESTICUS ATER.

Tanagra atra, Gm. Syst. Nat. i. p. 898.

Saltator ater, Cab. in Schomb. Guiana, iii. p. 677; Scl. P. Z. S. 1856, p. 67.

Merumé Mountains, Roraima (3500–5000 ft.).

103. PITYLUS GROSSUS.

Loxia grossa, Linn. Syst. Nat. i. p. 307.

Pitylus grossus, Salv. & Godm. Biol. Centr.-Am., Aves, i. p. 331.

Bartica Grove, Merumé Mountains, Camacusa.

104. PITYLUS ERYTHROMELAS.

Loxia erythromelas, Gm. Syst. Nat. i. p. 859.

Pitylus erythromelas, Scl. P. Z. S. 1856, p. 65.

Camacusa.

105. PITYLUS VIRIDIS.

Pitylus canadensis (Linn.), Cab. in Schomb. Guiana, iii. p. 677.

Pitylus viridis (Vieill.), Scl. P. Z. S. 1856, p. 65.

Bartica Grove, Merumé Mountains, Camacusa.

106. GUIRACA CYANEA.

Loxia cyanea, Linn. Syst. Nat. i. p. 303.

Guiraca cyanea, Scl. Cat. Am. B. p. 101.
Bartica Grove, Camacusa.

107. ORYZOBORUS CRASSIROSTRIS.
Loxia crassirostris, Gm. Syst. Nat. i. p. 862.
Oryzoborus crassirostris, Scl. Cat. Am. B. p. 102.
Coccoborus ater, Cab. in Schomb. Guiana, iii. p. 678.
Bartica Grove.

108. ORYZOBORUS TORRIDUS.
Loxia torrida, Gm. Syst. Nat. i. p. 884.
Oryzoborus torridus, Scl. Cat. Am. B. p. 102.
Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.).

109. SPERMOPHILA MINUTA.
Loxia minuta, Linn. Syst. Nat. i. p. 307.
Spermophila minuta, Scl. Ibis, 1871, p. 3.
Roraima (3500 ft.).

110. SPERMOPHILA CASTANEIVENTRIS.
Sporophila castaneiventris, Cab. in Schomb. Guiana, iii. p. 679.
Spermophila castaneiventris, Scl. Ibis, 1871, p. 7.
Bartica Grove.

111. SPERMOPHILA LINEATA.
Loxia lineata, Gm. Syst. Nat. i. p. 858.
Spermophila lineata, Scl. Ibis, 1871, p. 11.
Bartica Grove.

112. SPERMOPHILA LINEOLA.
Loxia lineola, Linn. Syst. Nat. i. p. 304.
Spermophila lineola, Scl. Ibis, 1871, p. 13.
Merumé Mountains, Camacusa, Roraima (3500 ft.).

113. *SPERMOPHILA COLLARIA.
Loxia collaria, Linn. Syst. Nat. i. p. 305.
Spermophila collaria, Scl. Ibis, 1871, p. 9.
Sporophila americana, Gm., Cab. in Schomb. Guiana, iii. p. 678.
Not represented in Mr. Whitely's collection.

114. SPERMOPHILA GUTTURALIS.

Fringilla gutturalis, Licht. Verz. Doubl. p. 26.

Spermophila gutturalis, Scl. Ibis, 1871, p. 15.

Roraima (3500 ft.).

115. SPERMOPHILA GRISEA.

Loxia grisea, Gm. Syst. Nat. i. p. 857.

Spermophila grisea, Scl. Ibis, 1871, p. 18.

Roraima (3500 ft.).

116. SPERMOPHILA PLUMBEA.

Fringilla plumbea, Wied, Beitr. iii. p. 579.

Spermophila plumbea, Scl. Ibis, 1871, p. 18.

Roraima (3500 ft.).

117. VOLATINIA JACARINA.

Tanagra jacarina, Linn. Syst. Nat. i. p. 314.

Volatinia jacarina, Scl. Cat. Am. B. p. 106 (partim).

Roraima.

Roraima birds have the under wing-coverts and the inner edge of the quills near the base white, as in Brazilian birds, the true *V. jacarina* (Linn.). The same form is found at Para.

118. VOLATINIA SPLENDENS.

Fringilla splendens, Vieill. N. Dict. d'Hist. N. xii. p. 173.

Bartica Grove.

A male from this locality agrees with Vieillot's description of *F. splendens* from Cayenne, inasmuch as the under wing-coverts and the base of the quills are black and not white as in *V. jacarina.*

119. PHONIPARA FUMOSA.

Phonipara fumosa, Lawr. Ann. Lyc. N. Y. x. p. 396; Salv. & Godm., anteà, p. 118.

Phonipara phæoptila, Salv. & Godm. Ibis, 1884, p. 445.

Roraima (3500 ft.).

120. PAROARIA NIGRIGENIS.

Nemosia nigrigenys, Lafr. Rev. Zool. 1846, p. 273.

Paroaria nigrigenys, Scl. Cat. Am. B. p. 108.

Calyptrophorus gularis, Cab. in Schomb. Guiana, iii. p. 678 (?).

Camacusa.

In *P. gularis* the lores are scarlet, whereas in this closely allied species they are black.

121. CORYPHOSPINGUS CRISTATUS.

Fringilla cristata, Gm. Syst. Nat. i. p. 926.

Coryphospingus cristatus, Scl. Cat. Am. B. p. 109.

Bartica Grove.

A single female specimen of this widely-ranging species, of which we have specimens from Peru, Bolivia, and South Brazil.

122. CATAMENIA, sp.?

Roraima (6000 ft.).

The three specimens of *Catamenia* in Mr. Whitely's collection are all in immature plumage, and therefore cannot be satisfactorily determined. They most resemble examples of *C. homochroa* of Ecuador.

123. ZONOTRICHIA PILEATA.

Emberiza pileata, Bodd. Tabl. Pl. Enl. p. 23.

Zonotrichia pileata, Scl. Cat. Am. B. p. 113.

Zonotrichia matutina (Gm.), Cab. in Schomb. Guiana, iii. p. 679.

Merumé Mountains, Roraima (3500–4500 ft.).

124. COTURNICULUS MANIMBE.

Fringilla manimbe, Licht. Verz. Doubl. p. 253.

Coterniculus manimbe, Scl. Cat. Am. B. p. 116.

Roraima (3500 ft.).

The grey edgings to the feathers of the head and back are rather narrower in these birds than in the Brazilian race, giving the upper surface of the plumage a rather more rufescent tinge.

125. EMBERIZOIDES MACRURUS.

Fringilla macroura, Gm. Syst. Nat. i. p. 918.

Emberizoides macrourus, Scl. Cat. Am. B. p. 118.

Merumé Mountains, Roraima (3000–4000 ft.).

126. CHRYSOMITRIS ICTERICA.

Fringilla icterica, Licht. Verz. Doubl. p. 26.

Chrysomitris icterica, Scl. Cat. Am. B. p. 125.

Roraima (3500 ft.).

These specimens agree fairly with Bahia examples of *C. icterica,* the Brazilian form of *C. barbata.*

127. *SYCALIS MINOR.

Sycalis minor, Cab. in Schomb. Guiana, iii. p. 679.

Not represented in Mr. Whitely's collection.

128. *SYCALIS FLAVEOLA.

Sycalis brasiliensis, Cab. in Schomb. Guiana, iii. p. 679.

Not in Mr. Whitely's collection.

129. SYCALIS CITRINA.

Sycalis citrina, Pelz. Orn. Bras. pp. 232, 334.

Merumé Mountains, Roraima (2700–3700 ft.).

The only specimen of *Sycalis* obtained by Mr. Whitely appears to belong to this species, which is distinguished by having a white spot on the outer tail-feathers. Natterer's specimens were obtained in the provinces of Sao Paolo and Rio Janeiro.

130. OSTINOPS DECUMANUS.

Xanthornus decumanus, Pall. Spic. Zool. vi. p. 1, pl. 1.

Ostinops decumanus, Scl. Ibis, 1883, p. 151.

Cassicus cristatus (Gm.), Cab. in Schomb. Guiana, iii. p. 680.

Bartica Grove.

131. OSTINOPS VIRIDIS.

Oriolus viridis, Müll. Natursyst. Suppl. p. 87.

Ostinops viridis, Scl. Ibis, 1883, p. 152.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3000 ft.).

132. CASSICUS PERSICUS.

Oriolus persicus, Linn. Syst. Nat. i. p. 161.

Cassicus persicus, Cab. in Schomb. Guiana, iii. p. 681; Scl. Ibis, 1883, p. 157.

Bartica Grove.

133. CASSICUS AFFINIS.

Cassicus affinis, Sw. Orn. Draw. pl. 2; Scl. Ibis, 1883, p. 161.

Cassicus hæmorrhous, Cab. in Schomb. Guiana, iii. p. 681.

Bartica Grove, Camacusa.

134. *CASSICUS ALBIROSTRIS.

Cassicus albirostris, Cab. in Schomb. Guiana, iii. p. 681; Scl. Ibis, 1883, p. 159.

Not in Mr. Whitely's collection. Mr. Sclater doubts the occurrence of this species so far north.

135. ICTERUS CHRYSOCEPHALUS.

Oriolus chrysocephalus, Linn. Syst. Nat. i. p. 164.

Icterus chrysocephalus, Scl. Ibis, 1883, p. 359.

Bartica Grove, Roraima (3500 ft.).

136. DOLICHONYX ORYZIVORA.

Emberiza oryzivora, Linn. Syst. Nat. i. p. 311.

Dolichonyx oryzivora, Scl. Ibis, 1884, p. 2.

Camacusa.

137. *MOLOTHRUS ATRONITENS.

Molothrus atronitens, Cab. in Schomb. Guiana, iii. p. 6; Scl. Ibis, 1884, p. 6.

Not in Mr. Whitely's collection.

138. AGELÆUS IMTHURNI.

Agelæus imthurni, Scl. P. Z. S. 1881, p. 213; 1884, p. 13.

Macragelæus imthurni, Berlepsch, *in litt.*

Merumé Mountains, Roraima (3700–5000 ft.).

139. *XANTHOSOMUS ICTEROCEPHALUS.

Oriolus chrysocephalus, Linn. Syst. Nat. i. p. 15.

Chrysomus icterocephalus, Cab. in Schomb. Guiana, iii. p. 681.

Xanthosomus icterocephalus, Scl. Ibis, 1884, p. 15.

Not in Mr. Whitely's collection.

140. LEISTES GUIANENSIS.

Oriolus guianensis, Linn. Syst. Nat. i. p. 162.

Leistes guianensis, Scl. Ibis, 1884, p. 21.

Leistes americanus (Gm.), Cab. in Schomb. Guiana, iii. p. 681.

Yuruani River, Roraima (3500 ft.).

141. STURNELLA LUDOVICIANA.

Sturnella ludoviciana, Cab. in Schomb. Guiana, iii. p. 682.

Sturnella ludoviciana meridionalis, Scl. Ibis, 1884, p. 26.

Roraima (3500 ft.).

142. *LAMPROPSAR TANAGRINUS.

Icterus tanagrinus, Spix, Av. Bras. i. p. 67, pl. 64. f. 1.

Lampropsar tanagrinus, Scl. Ibis, 1884, p. 149.

Lampropsar guianensis, Cab. in Schomb. Guiana, iii. p. 682.

Not in Mr. Whitely's collection.

143. *QUISCALUS LUGUBRIS.

Quiscalus lugubris, Sw. An. in Menag. p. 299; Scl. Ibis, 1884, p. 162.

Chalcophanes jamaicensis et *C. minor,* Cab. in Schomb. Guiana, iii. p. 683.

Not in Mr. Whitely's collection.

144. CASSIDIX ORYZIVORA.

Oriolus oryzivorus, Gm. Syst. Nat. i. p. 386.

Cassidix oryzivora, Scl. Ibis, 1884, p. 165.

Scaphidura atra (Vieill.), Cab. in Schomb. Guiana, iii. p. 683.

Bartica Grove.

145. CYANOCORAX CAYANUS.

Corvus cayanus, Linn. Syst. Nat. i. p. 157.

Cyanocorax cayanus, Cab. in Schomb. Guiana, iii. p. 683; Sharpe, Cat. B. Brit. Mus. iii. p. 122.

Bartica Grove, Camacusa.

146. *CYANOCORAX VIOLACEUS.

Cyanocorax violaceus, Du Bus, Bull. Ac. Brux. xiv. pt. 2, p. 103; Sharpe, Cat. B. Brit. Mus. iii. p. 125.

Cyanocorax hyacinthinus, Cab. in Schomb. Guiana, iii. p. 683.

Not represented in Mr. Whitely's collection. There is a skin in the British Museum obtained by Schomburgk.

[To be continued.]

XIX.—*Notices of recent Ornithological Publications.*

[Continued from p. 117.]

48. *'The Auk.'*

['The Auk,' a Quarterly Journal of Ornithology. Continuation of the 'Bulletin of the Nuttall Ornithological Club.' Vol. I. No. 4, October 1884; Vol. II. No. 1, January 1885. Boston, Mass.]

In the number published last October, Mr. W. B. Burrows's list of the birds of the Lower Uruguay is concluded; and there are several other interesting papers on pure ornithology. Amongst these is a description of a new subspecies of Willow-Grouse from Newfoundland, called by Dr. L. Stejneger *Lagopus alba alleni*, distinguished from *L. alba* by having the shafts of the primaries and secondaries black, and the wing-feathers, even some of the coverts, mottled with blackish. No less than three papers treat, more or less, of the question of zoological nomenclature, commencing with one contributed by Prof. Coues, dated "May 27th, S.S. 'Oregon,' Mid-ocean," and ending with the third series of the "Analecta Ornithologica" by Dr. Stejneger. This is followed by the Report of the Second Meeting of the American Ornithologists' Union, at which the Editors of 'The Ibis' were courteously invited to assist; and they take this opportunity of expressing—although inadequately—their sense of the kind attentions they everywhere experienced from their brother ornithologists in America.

The earlier papers in the 'Auk' for January relate almost entirely to American birds; but Dr. Stejneger contributes a fourth series of his "Analecta Ornithologica," and Dr. C. Hart Merriam (who is now in Europe, and may be expected to visit us in April) gives an interesting Preliminary Report of the Committee on Bird-Migration. If hard work and elaborate returns from all parts of an area far exceeding that of Europe can teach us some truths about the migrations of birds, we are now in a fair way to obtain them. Six thousand circulars have been distributed, and one thousand returns have been received during the first year! We understand that Congress will vote aid to the extent of $5000 (£1000) for the first year; *our* British Migration Committee receives £35 from the British Association!

49. *Baird, Brewer, and Ridgway on the Water-Birds of North America.*

[Memoirs of the Museum of Comparative Zoology at Harvard College. Vol. xiii. The Water-Birds of North America. By S. F. Baird, T. M. Brewer, and R. Ridgway. Vol. II. 4to. Boston: 1884.]

The concluding volume of this important work contains the remainder of the Ducks; the Steganopodes, including *Phaeton*; the Skimmers, Gulls, Terns, and Skuas, an order of sequence which passes our comprehension; followed by the Tubinares, and ending with the Pygopodes. Of the general style of execution it is impossible to speak in other than terms of praise; and as regards the thoroughly American species, the latest available information will, as a rule, be found. In their references to Old-World authorities the writers are not unfrequently at a disadvantage, from not being aware of the relative trustworthiness, or the reverse, of their sources of information; and there is a tendency to accept as gospel statements that have been shown to be incorrect. We cannot speak of Col. Grayson's specimens of the "Little Gull" from Mazatlan, not having seen them, although we do not for a moment suppose that they really belong to our *Larus minutus*; but as regards the reported occurrence of this species in the Arctic regions, it is well known and has been conclusively proved that the bird so named by Richardson was Bonaparte's Gull (*L. philadelphia*), as were also the birds shot at Bermuda by Major Wedderburn. Nor can a work of this magnitude, and by more than one author, be expected to be free from minor errors and misprints; but on the whole they are comparatively few, and do not materially detract from the merit of the harmonious whole.

50. *Berlepsch on the Birds of Bucaramanga.*

[Untersuchungen über die Vögel der Umgegend von Bucaramanga in Neu-Granada. Von Hans von Berlepsch. J. f. O. 1884, p. 273.]

This carefully-prepared memoir is based principally upon collections received by the Lübeck and Bremen Museums from the vicinity of Bucaramanga, in Colombia, on which district almost the only previous authority was Mr. Wyatt's paper in this Journal ('Ibis,' 1871, p. 113). Of 151 species enumerated and commented upon (of which 136 also occur in collections from Bogota) three are described as new—*Thryophilus minlosi, Pœcilotriccus lenzi,* and *Phyollmyias cristatus.* The two former are also figured. *Pœcilotriccus* is a new genus of Tyrannidæ, to be placed between *Todirostrum* and *Euscarthmus,* and contains also *Tod. ruficeps* of Bogota and *Tod. rufigene* of Ecuador.

51. *Bidwell on Sabine's Gull.*

[On the Occurrence of Sabine's Gull (*Xema sabinii*) in Adult Plumage in the Isle of Mull. By Edward Bidwell. Proc. R. Phys. Soc. Edinb., Session 1883–84, p. 131.]

Although many immature examples of Sabine's Gull have been obtained in the British Islands, and a certain number on the Continent, yet only five specimens in breeding-plumage are recorded, and the localities ascribed to some of them are open to doubt. The above-mentioned bird and one shot in Bridlington Bay on 10th August, 1872, are the only instances of adults in Britain; and an adult was obtained on the coast of Brittany on the 25th August, 1872, just fifteen days later. (*Cf.* Yarrell's Brit. Birds, 4th ed. vol. iii. p. 575.)

52. *W. Blasius on a new Trumpeter.*

[Ueber einen vermuthlich neuen Trompeter-Vogel von Bolivia (*Psophia cantatrix,* Boeck, in litt.). Von Prof. Dr. Wilh. Blasius. J. f. O. 1884, p. 203.]

This supposed new species is described from information received from Prof. Eugen von Boeck, Director of the Central School in Cochabamba. The bird in question is found on the Mamoré and Beni rivers, and would seem to come nearest to *Ps. leucoptera,* if it be not identical with that species.

53. *W. Blasius on Grabowsky's latest Bornean Collections.*

[Ueber die neuesten Ergebnisse von Herrn F. J. Grabowsky's ornithologischen Forschungen in süd-ost Borneo. Idem. *Tom. cit.* p. 210.]

Prof. Blasius published his first paper on Grabowsky's Bornean bird-collections in the 'Verhandlungen der zoologisch-botanischen Gesellschaft' of Vienna (1883, pp. 1–90). Grabowsky has since then shifted his quarters, and sent home altogether 85 more bird-skins, which have been already partly reported on at a sitting of the 'Verein für Naturwissenschaft' of Brunswick. Prof. Blasius now describes the new district visited by Grabowsky at some length. It lies up the Negara, a confluent of the Bareto, in Eastern Borneo, and is shown in Carl Bock's map. A list of about fifty species, to which the birds represented in Grabowsky's last collection are referable, follows, and special remarks upon some twenty-five of these. Near Mindai, Grabowsky found *Machærhamphus alcinus* breeding, and shot one of the pair off the nest, which was placed on a lofty tree, but was unfortunately *empty*.

54. *W. Blasius on the Breast-bone of Birds.*

[Ueber Vogel-Brustbeine. Idem. *Tom. cit.* p. 228.]

This is an abstract of a paper read before the German Ornithological Society at their Meeting in Oldenburg. Dr. Blasius, who had long made the sterna of birds a special object of study, found in the series of the bones accumulated by Dr. Finsch during his recent travels in the Pacific many forms of great interest, and makes special remarks on the sterna of *Scythrops, Nestor, Ptilorhis, Esacus,* and *Dendrochelidon.*

55. *W. Blasius's third Paper on the Great Auk.*

[Neue Thatsachen in Betreff der Ueberreste von *Alca impennis,* Linn. Idem. Tageblatt d. Naturf. Versamm. zu Magdeburg, 1884, p. 321.]

This third recent contribution (*cf.* 'Ibis,' 1884, pp. 205 & 454) to the history of the existing remains of *Alca impennis* contains some additions to the former lists, with rectifications of minor details, and tracings of the history of certain specimens which have changed hands.

56. *Bogdanow on Russian Ornithology.*

[Conspectus Avium Imperii Rossici. Auctore Modesto Bogdanow. Fasc. 1. 4to. St. Pétersbourg: 1884.]

This First Part commences with the Columbæ, three races of *C. livia* being recognized; and this Order is followed by the Heteroclitæ, in which the Glareolidæ are located, as well as the Pteroclidæ. In the Gallinæ, *Lagopus rupestris,* subsp. *insularis,* described as new from Bering Island, is evidently *L. ridgwayi,* Stejneger; *Tetrao urogalloides,* var. *β. sachalensis,* is a supposed novelty; and so is *Coturnix ussuriensis.* The Grallæ, comprising the Bustards, Cranes, Plovers, Sandpipers, and Herons, conclude the volume. Amongst the last named is a new species, *Butorides schrencki.*

57. *British Association's Report on Migration in* 1883.

[Report on the Migration of Birds in the Spring and Autumn of 1883. By Mr. J. A. Harvie-Brown, Mr. J. Cordeaux, Mr. R. M. Barrington, and Mr. A. G. More. 8vo. London: 1884.]

A feature in this, the Fifth Report, is a return from Skykkesholm, Iceland, by M. Thorlacius. Mr. Gätke continues to give us the benefit of his observations on Heligoland, prolific of rarities; and the Committee are again indebted to Prof. Lütken of Copenhagen for a list of the birds killed by striking against the lantern of the lighthouse at Stevns, the projecting part of Zealand. It is gratifying to notice an increase in the number of the schedules filled up by the keepers of the lighthouses and lightships on our coasts; and we note with satisfaction that the money-grant of the Association has been slightly augmented.

58. *Buckley and Harvie-Brown on the Birds of Sutherlandshire.*

[The Vertebrate Fauna of Sutherlandshire. By T. E. Buckley, B.A. &c., and J. A. Harvie-Brown, F.R.S.E. &c. Being an Appendix to the second edition of the late Mr. Charles St. John's 'Tour in Sutherland.' 1884.]

It would be impossible to indicate two naturalists more eminently qualified to write the history of Sutherlandshire and its productions than the above-named Members of the B.O.U., who have studied the natural history of that extensive county for the past seventeen years. The ornithological portion of their work is excellent; and we particularly admire the caution exercised with regard to the reported occurrence of species which might not unreasonably be expected to visit Sutherland, although absolute proof is still wanting. The relative distribution of species in East and West Sutherland is very interesting.

59. *Collett on the Great Auk in Norway.*

[Ueber *Alca impennis* in Norwegen. Von Robert Collett. Mitth. ornith. Ver. in Wien, 1884.]

The author's chief object seems to be the rehabilitation of the testimony (to which, as before stated in 'The Ibis,' 1861, p. 377, Wolley demurred) of Herr Brodtkorb, who professes that in 1848 he shot an *Alca impennis* off the coast of East Finmark. Whether the attempt be successful would take too long here to discuss. A catalogue, with measurements, of the bones of this species found on Funk Island in 1841 by Stuwitz, and now in the Christiania Museum, is a useful addition to the lists of its remains hitherto published; but are we really to believe that so much individual variation is shown by the specimens as from 46 mm. to 77 mm. in the breadth of the skull, or is not the latter number a misprint?

60. *Cory on the Birds of San Domingo.*

[The Birds of Haiti and San Domingo. By Charles B. Cory, F.L.S. Part III. 4to. Boston: 1884.]

Mr. Cory's third part of the Birds of Haiti and San Domingo carries on the subject to the Scolopacidæ and Parridæ. The following species are figured in this part:—*Conurus chloropterus*, *Rupornis ridgwayi* in three stages of plumage, *Œdicnemus dominicensis*, and *Parra gymnostoma*.

61. *Dresser's Monograph of the Bee-eaters.*

[A Monograph of the Meropidæ, or Family of the Bee-eaters. By H. E. Dresser, F.L.S. Part III. Small folio. London: 1884.]

Part III. of Mr. Dresser's Monograph contains well-executed coloured plates of the seven following species:—

Merops superciliosus.
—— apiaster.
—— malimbicus.
—— nubicus.
Merops nubicoides.
Dicrocercus hirundineus.
Melittophagus lafresnayei.

62. *Fischer on the Birds of Masai-land.*

[Uebersicht der von Dr. G. A. Fischer auf seiner im Auftrage der Hamburger Geographischen Gesellschaft unternommenen Reise in das Masailand gesammelten und beobachteten Vogelarten. Bearbeitet von Dr. G. A. Fischer.]

In this memoir Dr. Fischer gives an account of the birds collected and observed during his recent journey into Masai-land from Pangani, in which he passed south-west of Kilimanjaro, and reached Lake Naivasha. The two principal places at which collections were made were Great Aruscha on Mount Maeru, and the village of Nguruman, in long. 36° E., lat. 2° S., on the eastern slope of a mountain-chain which extends from north to south through Masai-land. Between the coast and Lake Naivasha altogether 345 species of birds were observed, and specimens of 269 species were obtained, of which 36 were new. The new species have been already described by Drs. Fischer and Reichenow in the 'Journal für Ornithologie' for January 1884 (*cf.* 'Ibis,' 1884, p. 339).

A new Nightingale (*Lusciola africana*) sang morning and evening to the traveller during his twelve days' stay at Little Aruscha, near the base of Kilimanjaro; and a Cuckoo with three tones to its cry (*Cuculus heuglini*) was met with in many spots in Masai-land. Its egg was taken April 28th in the nest of *Erythropygia leucoptera*. A pair of *Cuculus canorus* were also obtained at Little Aruscha on March 29th. *Parus fringillinus*, *Euplectes frederichseni*, *Notauges fischeri*, and *Drepanorhynchus reichenowi* are figured.

63. *Glanville's Catalogue of the Albany Museum, Cape Colony.*

[Catalogue of the Natural History Collection of the Albany Museum, Graham's Town. 8vo. Cape Town: 1883.]

The Albany Museum at Graham's Town is said to be the only institution of the kind at present existing in the eastern districts of the Cape Colony, with the exception of a small collection in the Gill College, Somerset East. Its energetic Curator, Mr. M. Glanville, had prepared the present catalogue with the view of showing what specimens it already possesses, and with the hope of inducing his fellow-colonists to help him to make it more complete. The series of South-African birds enumerated (pp. 15–52) seems to be of considerable extent.

64. *Godman and Salvin's 'Biologia Centrali-Americana.'*

[Biologia Centrali-Americana; or, Contributions to the Knowledge of the Fauna and Flora of Mexico and Central America. Edited by F. DuCane Godman and Osbert Salvin. (Zoology.) Parts XXVIII. to XXXIV. 4to. London: 1884. Published for the Editors by R. H. Porter, 10 Chandos Street, Cavendish Square, W.]

Our friends make good progress with this important work. Seven numbers have been issued since our last notice (Ibis, 1884, p. 208). The Bird parts are in numbers xxviii. and xxxiv., and carry on the Passeres of the Oscinine section to the commencement of the Fringillidæ. The following species are figured:—*Chlorospingus punctulatus, C. pileatus, C. hypophæus, Buarremon capitalis, B. tibialis,* and *Pitylus celæno.*

65. *Gould's 'Birds of New Guinea.'*

[The Birds of New Guinea and the adjacent Papuan Islands, including any new Species that may be discovered in Australia. By [the late] John Gould, F.R.S. &c. Parts XVII. & XVIII. Folio. London: 1884.]

We have two parts of the 'Birds of New Guinea' to notice, containing illustrations of the following species:—

PART XVII.

Ninox odiosa.
Carpophaga finschi.
Ptilopus lewisi.
Graucalus pusillus.
Rhipidura cockerelli.
Pomarea ugiensis.
Piezorhynchus richardsii.
Myiagra ferrocyanea.
Myzomela erythrina.
—— melanocephala.
Dicæum æneum.
Zosterops longirostris.
Stigmatops albo-auricularis.

PART XVIII.

Drepanornis cervinicauda.
Charmosyna margaritæ.
Ptilopus richardsi.
Myzomela wakoloensis.
Dicæum tristrami.
Myiagra cervinicauda.
Pomarea rufocastanea.
Pomarea castaneiventris.
Rhipidura leucothorax.
Piezorhynchus brodiei.
—— browni.
Halcyon leucopygia.
Zosterops fuscifrons.

Many fine species from the Solomon Islands are included in this series, and render it evident that the avifauna of this group is most rich and varied, and worthy of special investigation. Mr. Sharpe does not give us the locality of *Myiagra ferrocyanea*, which should have been stated to be from Guadalcanar, Solomon Islands.

66. *Gurney on the Birds of Norfolk.*

[Catalogue of the Birds of Norfolk. By J. H. Gurney, Jun. Reprinted from Mason's 'History of Norfolk.' 8vo. London: 1884.]

This is an exceedingly useful list, conveying in a condensed form a large amount of information. It is especially serviceable as regards the distribution of the water-birds, owing to the delay in the appearance of those fuller details which we may, perhaps, some day see in the long-expected vol. iii. of Mr. Stevenson's 'Birds of Norfolk.' The arrangement is the only drawback; for, unfortunately, the author has adopted the sequence propounded by Sundevall, so that it is no easy matter to know where to look for a bird. Who would expect to find the Pigeons between the Kingfisher and the Barn-Owl, and Pallas's Sand-Grouse following the Osprey? On the other hand, we do not find the Pratincole in juxtaposition with the Nightjar, where Sundevall placed it! We may be partial, but, with all its imputed defects, we think that the arrangement of the 'B. O. U. List' is better than this.

67. *Hawtayne's Taxidermic Notes.*

[Taxidermic and other Notes. By a Collector. 12mo. 62 pp. Georgetown, Demerara: 1884.]

Mr. Hawtayne's handy little book will, we trust, carry out its excellent object—that of assisting persons desirous of contributing to the Georgetown Museum or the Exhibitions to be held in Georgetown in 1885 and in London in 1886. The notes, compiled from the well-known directions of the Smithsonian Institution and other recognized authorities, relate to the preparation of specimens of natural history and other similar objects.

68. *Henke on the Ostrich-question.*

[Beitrag zur Lösung der Straussenfrage. Von K. G. Henke. Zeitsch. f. d. gesammte Ornithol. 1884, p. 219.]

Herr Henke recognizes three different varieties of Ostrich-eggs, which he thinks must be the produce of three distinct species. Figures are given of eggs of *Struthio molybdophanes* of Somaliland and *Struthio australis* of South Africa.

69. *Homeyer on a new Stonechat.*

[Beschreibung eines neuen Steinschmätzers *Saxicola cypriaca.* Von E. F. von Homeyer. Zeitschr. f. d. g. Orn. 1884, p. 397.]

The supposed new species of Stonechat from Cyprus resembles *S. morio,* but has a blacker back, a lighter rufous breast, and less white in the tail.

70. *Huet on Additions to the Jardin des Plantes.*

[Note sur les naissances, dons et acquisitions de la Ménagerie du Muséum d'Histoire Naturelle, pendant les mois de Septembre, Octobre, Novembre et Décembre 1883. Par M. Huet. Bull. Soc. d'Acclimatation, Feb. 1884.]

The number of additions to the collection of living birds in the Jardin des Plantes in 1883 was 319. Of these the most noticeable seem to have been examples of *Rhea darwini* and *Bernicla poliocephala.*

71. *Le Moine on Canadian Ornithology.*

[Ornithology in Canada and in the United States. By J. M. Le Moine. From 'Quebec Morning Chronicle' of 23rd August, 1884; separate issue.]

A short compilation prepared for use of the Members of the British Association.

72. *Meyer on Birds' Nests and Eggs from the East Indies.*

[Notizen über Vögel Nester und Eier aus dem ostindischen Archipel, speciell über die durch Herrn C. Ribbe von den Aru-Inseln jüngst erhaltenen. Von A. B. Meyer. Zeitschr. f. d. g. Orn. 1884, p. 269.]

Eighty-two species of birds, mostly from the Aroo group, are noticed, and information of different kinds supplied about them. *Rhectes analogus*, from Aroo, and *Xanthotis rubiensis*, from Rubi, are described as new. Two young females of *Eclectus roratus*, hatched in captivity at Karlsruhe (*cf.* Gefiederte Welt, 1884, p. 413), are figured. Many nests and eggs are described, and a selection of eggs figured, amongst which is a (damaged) one of *Paradisea apoda*.

73. '*The Naturalist.*'

[The Naturalist: a Journal of Natural History for the North of England. Edited by W. Denison Roebuck and W. Eagle Clarke. Nos. 109–115, August 1884 to February 1885. 8vo. London and Leeds.]

This is, we presume, a continuation of the 'Yorkshire Naturalist' under a more general title. Be this as it may, the first of the parts before us contains some very interesting papers and items of information from the Editors and such contributors as Messrs. Bolam, Cordeaux, Whitaker, and Lord Walsingham. Mr. Bolam records the capture of the Red-breasted Flycatcher (*Muscicapa parva*) in his garden at Berwick-on-Tweed, on the 5th October 1883, the fourth occurrence in the British Islands. In No. 112 the Rev. H. H. Slater records the Barred Warbler (*Sylvia nisoria*) obtained on the coast of Holderness on the 28th August, and exhibited at a recent Meeting of the Zoological Society. A Tengmalm's Owl was obtained on the 18th October, and identified by Mr. W. E. Clarke. The authenticated breeding of the Reed-Warbler in Cheshire, the furthest north-western locality on record, is interesting. In addition to the numerous articles and notes on birds, No. 115 contains a useful bibliography for 1884 of papers relating to the natural history of the north of England; and so far this Magazine appears to be worthy of high and hearty praise.

74. *Olphe-Galliard on the Ornithology of Western Europe.*

[Contributions à la Faune Ornithologique de l'Europe Occidentale. Par Léon Olphe-Galliard. Fasc. 1. 8vo. Bayonne: 1884.]

The present work is intended to treat of the birds of Spain and Portugal, the Azores, the Balearic Islands, France, French Switzerland, the Rhine valley to the North Sea, the coasts of Belgium, the British Islands, and the Channel Islands. We do not know why the Canaries are excluded. Following Scopoli, the class Aves is dedicated to Edwards—the author commencing with the suborder Anseres, comprising, so far, the Auks, Divers, and Grebes. There is evidence of great research, but we have some doubt whether the more recent authorities have been always consulted.

75–78. *Ridgway on American Birds.*

[75. Note on *Selasphorus torridus*, Salvin. Pr. U. S. Nat. Mus. 1884, p. 14.

76. *Melanetta fusca* (Linn.) in Alaska. *Tom. cit.* p. 68.

77. Description of a new Snow-Bunting from Alaska. *Loc. cit.*

78. Description of a new Species of Coot from the West Indies. *Tom. cit.* p. 358.]

In No. 75 the *Selasphorus* from the Volcan de Irazú, Costa Rica, recorded in vol. v. p. 497 as *S. flammula*, is referred to *S. torridus*. In No. 76 it is stated that the European Velvet Scoter has been obtained by Mr. C. L. McKay in Alaska, where *Melanetta velvetina* also occurs. No. 77 contains a description of a very fine and distinct new species of Snow-Bunting which has been discovered in Alaska by the Smithsonian collectors. Mr. Ridgway calls it *Plectrophenax hyperboreus*; the adult male in spring is pure white, except on the ends of the five outer primaries, which are chiefly black. According to No. 78, the new Coot, *Fulica caribbæa*, from Guadeloupe and St. Johns, W. I., is allied to *F. americana*, but differs in its slenderer bill and the form and colour of the frontal shield.

79. *Salvadori on the Birds of Shoa.*

[Spedizione Italiana nell' Africa Equatoriale—Risultati Zoologici—Uccelli dello Scioa e della regione fra Zeila e lo Scioa. Per Tommaso Salvadori. Annali Mus. Civ. Stor. Nat. Genova, ser. 2, i. 1884, p. 19.]

The well-known Italian naturalist Antinori went to Shoa, in Southern Abyssinia, in 1876, at the head of an exploring expedition, and remained there, or in its vicinity, until his death in 1877. During the six years of his stay in that country (only known to science previously from the results of the visit of our countryman, Sir W. S. Harris, and of a collector employed by Rüppell), Antinori made extensive collections in every branch of natural history. Of birds there were received in Italy 1531 specimens from Shoa, besides about 30 others from other localities. These are worked out by Count Salvadori in his usual accurate and painstaking manner, and are referred to 307 species (from Shoa), of which five (*Caprimulgus frænatus*, *Psalidoprocne antinorii*, *Euplectes scioanus*, *Textor scioanus*, and *Podiceps infuscatus*) are regarded as new. The exact localities and collector's field-notes are given of every specimen. A nest of *Colius leucotis* and two eggs are in the collection. The nest is cup-shaped, only slightly hollowed, and placed in the centre of a dense thorn-bush. The eggs are rather rounded, whitish, with (apparently) fine punctulations of dark grey, which, however, are perhaps attributable to bad conservation.

80. *Saunders's Edition of 'Yarrell's British Birds.'*

[A History of British Birds. By the late William Yarrell, V.P.L.S., F.Z.S. Fourth Edition. Revised to the end of the Second Volume by Alfred Newton, M.A., F.R.S.; continued by Howard Saunders, F.L.S., F.Z.S. Parts XXVI.-XXVIII. December 1884 to March 1885.]

Part XXVI. contains the Herodiones; Part XXVII. the Flamingo (which has occurred three or four times in England, and always in autumn), the Geese, the Whooper, and Bewick's Swan, the other Swans and nearly all the fresh-water Ducks being comprised in Part XXVIII.

81. *Smithsonian Report for* 1882.

[Annual Report of the Board of Regents of the Smithsonian Institution, showing the operations, expenditure, and condition of the Institution for the Year 1882. 8vo. Washington: 1884.]

The most interesting portion of this Report to ornithologists is Mr. Ridgway's account of the bird-collection in the National Museum, which, by special Act of Congress, has been placed under the charge of the Smithsonian Institution (pp. 132–135). The total number of specimens in the collection when the Report was prepared was 44,354. Forty-four papers based upon materials provided by the collection were published in 1882.

82. *Stejneger on Trinomials in Ornithology.*

[On the Use of Trinomials in American Ornithology. By Leonard Stejneger. Proc. U.S. Nat. Mus. 1884, p. 70.]

Mr. Stejneger gives us an excellent essay on trinomials, which he regards "as a nuisance, but a very necessary nuisance." He shows that, although now more generally employed in America than elsewhere, trinomials are by no means an American invention. Sundevall was the father of modern trinomialism, and Schlegel, in 1844, introduced twenty-seven subspecies into his list of European birds, adding the subspecific name without any connecting word or letter. J. H. Blasius, Bonaparte, Middendorff, and others also employed trinomials freely.

It has been said that the great objection to the system is the opportunity it gives to the ignorant of naming as subspecies forms too slightly differentiated to require any such formal recognition. Mr. Stejneger is of opinion, in which we agree with him, that a more injurious use of trinomials is liable to be made in reducing good and distinct species to mere races or varieties. But he shows clearly that the recognition of the minor differences on which subspecies are based is of vital importance to the study of birds. He is also of opinion that these subspecies ought to have separate names, and that the best way of effecting this is the trinomial designation.

83. *Taczanowski's 'Ornithology of Peru.'*

[Ornithologie du Pérou. Par Ladislas Taczanowski. Tome ii. Royal 8vo. Rennes: 1884. 566 pp.]

The second volume of this laborious and most useful undertaking continues the account of the Passeres and concludes with the 911th species from the commencement of the work. Short Latin diagnoses and French descriptions are given of every species, besides general observations by the author and notes by the collector. The following species (besides subspecies) are described as new:—

Thamnophilus berlepschi.
Dysithamnus tambillanus.
Synallaxis paucalensis.
Anabazenops ruficollis.
Muscisaxicola grisea.
—— juninensis.
Leptopogon rufipectus.
Myiopatis wagæ.
Elainea gracilis.
Chloropipo unicolor.
Phœnicothraupis peruvianus.
Nemosia pectoralis.
Buarremon albiceps.
Anæretes nigricristatus.

M. Taczanowski refers *Sericossypha albocristata* (p. 387) to the Cotingidæ. He seems to have omitted *Pyranga rubra*, already recorded from Peru in P. Z. S. 1874, p. 514.

84. *Vila on the Ornithology of Gerona.*

[Fauna Ornitológica de la Provincia de Gerona, ó sea breve descripción de las aves sedentarias en la misma y las de paso accidental ó periódico, sus costumbres y alimentación bajo el punto de vista de utilidad ó perjuicio para con el hombre y la agricultura en general, por D. Estanislao Vayreda y Vila. 8vo. Gerona: 1883.]

From the title it will be seen that the object of this work is ambitious; but the result is far from satisfactory. It is only likely to be read by those who are already familiar with Spanish ornithology, to whom it will do no harm, inasmuch as they are capable of separating the wheat from the chaff, and they may even find some few grains of comfort in it. It positively bristles with what we will charitably call misprints; and the misstatements, if less numerous, are more serious. The Catalan names of the common species may be found useful by those who can properly identify the birds to which they apply.

XX.—*Letters, Announcements, &c.*

We have received the following letter addressed to the Editors of 'The Ibis:'—

Hendaye, le 22 Janvier, 1885.

Messieurs,—Je prends la liberté de vous envoyer quelques notes ornithologiques en vous priant de vouloir bien les faire insérer dans le prochain numéro de l'Ibis.

Les narines extérieures des Cormorans sont fort difficiles à découvrir, et ne consistent qu'en des simples fentes situées à l'extrémité d'une rainure, qui s'étend le long du bec. Cuvier les avait refusées aux Fous (*Sula*), et Brandt ne leur donnait d'autre issue que de petits trous percés dans la peau à la base du bec. Monsieur J. C. Ewart (Journ. Proc. Linn. Soc. xv. p. 455, 1881) dit que ces narines sont presque oblitérées; cet auteur paraît admettre qu'elles ne servent pas à l'introduction de l'air dans les poumons lorsque le bec est fermé.

L'expérience suivante, que j'ai répétée plusieurs fois, semblerait confirmer ce fait. Après avoir fermé le bec d'un de ces oiseaux avec soin et avoir bouché avec du mastic les bords de la mandibule supérieure et de l'inférieure, j'ai plongé dans l'eau toute la tête de l'oiseau; puis j'ai fait à l'aide d'un soufflet pénétrer avec force l'air par l'extrémité inférieure de la trachée. Ce fluide finissait toujours par se frayer un passage au travers du mastic, qu'il soulevait dans certains endroits, mais jamais je ne l'ai pu voir sortir par les narines. J'ai fait la même expérience sur un oiseau de cette même famille mais vivant, et j'ai toujours obtenu le même résultat. J'en ai donc conclu que les narines des Cormorans ne sont pas en communication avec la trachée. Cependant tous les doutes à cet égard pourraient être levés par de nouvelles expériences dirigées par les anatomistes.

Mr. Ewart ajoute que cette structure des narines explique la façon avec laquelle les Cormorans, après un vol prolongé, tiennent leur bec ouvert, comme pour recevoir l'air qui leur est nécessaire, et en faire provision. Je demanderais encore si la disposition des cellules aériennes souscutanées chez les Fous, et dont les Cormorans offrent aussi des traces, n'a pas

pour but de former comme des reservoirs d'air destinés à diminuer la fréquence des inspirations lorsque l'oiseau plonge ou lorsqu'il vole.

On trouve assez communément sur la plage d'Hendaye une Corneille qui diffère autant du *Corvus corone* que beaucoup d'autres oiseaux diffèrent de leur similaires dont ils ont été distingués spécifiquement. Cette Corneille offre une taille plus petite, ce qui se remarque au premier coup d'œil. Les poils des narines ne s'avancent jusqu'à la moitié du bec, tandis qu'ils sont plus courts chez le *C. corone.*

La faune ornithologique des Basses-Pyrénées peut encore s'enricher du *Larus affinis,* Reinhardt, dont trois exemplaires ont été recueillis à Hendaye. Le *Larus leucophæus* était très commun l'année dernière, mais il ne paraît pas l'être présente vers la fin de 1884 ni au commencement de 1885.

Recevez, Messieurs, l'assurance de ma parfaite considération.

LÉON OLPHE-GALLIARD.

Gift of the Salvin-Godman Collection to the British Museum.—As has been recorded in the 'Times' of March 6th, Messrs. Salvin and Godman have given to the nation their unrivalled collection of American birds, containing upwards of 20,000 specimens. These will be transferred from their present situation in Chandos Street to the Museum of Natural History at South Kensington in groups, as the various families treated of in the 'Biologia Centrali-Americana' are finished. There is, we believe, a stipulation in the terms of gift that any specimen required by the donors may be removed on loan from the Museum during the lifetimes of the donors or the survivor of them.

The Hume Collection of Indian Birds.—Another very important addition which the National Museum of Natural History is likely to receive shortly is Mr. A. O. Hume's collection of Indian birds, consisting, it is said, of an enormous series of some 60,000 specimens. As many of our readers are already aware, negotiations have been for some time in progress for the transfer of this collection to the British Museum. That the terms of transfer have been now finally arranged, we may assume from the fact that in the Civil-Service Estimates of the coming financial year an extra sum of £300 is among the votes (p. 374) for "packing and transmitting from Simla to England a part of Mr. Hume's collection of Indian Birds presented by him to the Trustees."

Ridgway Ornithological Club, Chicago.—At a meeting held on the 8th of January last the papers read were:—"Notes on the Humming-Birds of California," by Mr. B. T. Gault, and "Notes on some Australian Birds," by Prof. R. Ridgway. At the meeting held on March 5th, Mr. Jos. L. Hancock read a paper on the Birds of Corpus Christi, Texas, in which the occurrences of 94 species observed there in the months of March and April, 1884, were recorded.

News from the Caucasus.—Dr. Radde was intending to leave Tiflis in February last on a scientific expedition into the new Trans-Caspian provinces of Russia, and was expecting also to have an opportunity of exploring the adjoining mountains of Northern Chorassan. Dr. Radde informs us of the occurrence of *Halcyon smyrnensis* at Talysch, on the S.W. shore of the Caspian, in June last. This species is new to the Russian avifauna.

Black Redstart in Somersetshire.—On Jan. 14th, walking along the shore from Weston-super-Mare, near the mouth of the Axe, I saw five Black Redstarts (*Ruticilla tithys*). The first four were immature birds, the last was an apparently adult male in full plumage. They were picking about on the heaps of dead seaweed and other refuse thrown up by the tide, and flitted from heap to heap as I approached, sometimes alighting on the neighbouring stone wall. On the 25th of the same month I revisited the spot, but could not find them again; nearer Weston, however, I observed a single specimen, close to the further end of the new Parade.

P. L. SCLATER.

OBITUARY. *Dr. Rüppell, Prof. Severtzoff, Mr. E. W. White, and Mr. E. C. Rye.*—The veteran naturalist Dr. E. RÜPPELL, whose name is well known to all students of the Ethiopian fauna, died at Frankfort on December 10th, 1884, aged 90 years. In our next number we hope to be able to give some details of his career and work from the pen of one who is preeminently acquainted with them.

NIKOLAI ALEXSYEWICH SEVERTZOFF was born in 1827 and educated at the University of Moscow. At the age of eighteen he became acquainted with the well-known explorer G. S. Karelin, and from that time, according to his own account, the scientific investigation of Central Asia became the object of his life. In 1857 the opportunity of realizing his dream was afforded him by a mission from the Academy of Sciences to proceed to the Syr-Darya "to investigate the continental climate, and explain the geographical distribution of animals by physical conditions of terrestrial surface." On this expedition, in which he was taken prisoner by the Turkomans, receiving many sabre-wounds, the hideous cicatrices of which those who knew him will well remember, he acquired an intimate knowledge of the Ural Steppes and the Aralo-Caspian basin. While occupied in the working-out of the rich materials thus obtained, and when on the point of accepting a professorship, the chance came, and was immediately grasped, of visiting Tashkend in connection with General Tchernaief's campaign of 1864. The result was seen in the important work published in Moscow in 1873, the title of which may be rendered as "The Vertical and Horizontal Distribution of Animals in Turkestan," of which an abbreviated translation, edited by Mr. H. E. Dresser, appeared in 'The Ibis' for 1875–76. Severtzoff also contributed some notes on Central Asiatic birds to 'The Ibis' and to 'Stray Feathers' for 1875, as well as to the 'Journal für Ornithologie.' In 1880 he commenced a valuable treatise on the lines of bird-migration in Central Asia, particularly in the Pamir district, giving the results of his experiences on the Russian scientific expeditions from 1877–79, and embodying the observations of our Indian and other naturalists in Central Asia. A translation of his remarks on the birds of the Pamir region, with notes by Mr. Seebohm, was published in 'The Ibis' for 1883. On his estate at Petrovskoe, in the Government of Voroneje, Severtzoff had been engaged for the last four years in arranging and elaborating his materials, when the catastrophe came which ended his life. On the evening of the 8th of February, when driving in a carriage along with a friend on a beaten track on the frozen river Ikorts, a tributary of the Don, the carriage was suddenly plunged into the water owing to an unperceived rotten place in the ice, but all managed to extricate themselves. His friend urged him to make for the nearest house; but Severtzoff delayed, exclaiming "Where's my portfolio?" walked a few steps, and fell down in a fit; the driver was frozen to death a few minutes later. With that sublime British ignorance of the climate of South Russia which sent many of our soldiers to the Crimea with an equipment suitable for the tropics, a leading journal has stated that Severtzoff was "drowned while *bathing* in the Don."

With regret we record the premature death, at Philadelphia, U.S.A., on the 29th November last, of Mr. ERNEST WILLIAM WHITE, F.Z.S., for some time resident in Buenos Ayres. Mr. White was well known to many of us as an energetic traveller in the Argentine Republic and as a collector of its Birds; he was also author of a work on that country, entitled 'Cameos from the Silverland,' and of several papers in the 'Proceedings' of the Zoological Society of London.

The late Mr. E. C. RYE, who succumbed to an attack of small-pox on the 7th of February, was not nominally an ornithologist; but his attainments as a practical naturalist demand a few words of recognition even in a Journal, like the present, devoted to a special subject. Although principally an entomologist, it would have been impossible for any one to have edited the 'Zoological Record' during eleven years as he did, with singular ability, without having a considerable grasp of other branches of science; but how minute that knowledge was, can only be known to those who, like the writer, were brought into frequent discussion with him in connection with the above work. The Recorder of *Aves* during five consecutive years cannot let this opportunity pass of testifying to Mr. Rye's remarkable acquaintance with ornithological literature. His heart was thoroughly in his work, and whenever, in the extensive course of reading necessary for the preparation of the notices of new books for the 'Proceedings' of the Royal Geographical Society, he came upon a work containing any references to Zoology, there was sure to be a word of indication of which the Recorder might avail himself if he chose. Few men have been more deservedly regretted and will be more difficult to replace.

Mr. J. A. Allen.—We are pleased to be able to announce that Mr. J. A. Allen, of Cambridge, Mass., has been appointed Curator of Mammals and Birds in the American Museum of Natural History, Central Park, New York, and will enter upon his new duties on the 1st May. We cannot doubt that under Mr. Allen's care the bird-collection of this important museum will attain fresh development.

New Edition of Buller's 'Birds of New Zealand.'—Dr. Buller is preparing for the press a new and enlarged edition of his 'History of the Birds of New Zealand,' and will proceed to England shortly, in order to give the work his personal superintendence. The Plates will be drawn by Mr. Keulemans. The price (to Subscribers) will be ten guineas. Subscribers' names should be sent to the author, "Wellington, New Zealand."

THE IBIS.

FIFTH SERIES.

No. XI. JULY 1885.

XXI.—*Winter Notes from Morocco.*

By Capt. S. G. Reid.

In December 1884 and January 1885 Capt. Gould (late of the Royal Engineers) and I, prevented from visiting more promising localities by the certainty or probability of cholera-quarantine, found ourselves once more in our familiar hunting-grounds in Morocco. During our wanderings in search of sport (which was, unfortunately, very indifferent and much interfered with by bad weather) I made a few notes on the birds met with; and some of the species being rare, if not previously unrecorded, in Morocco, I have ventured to prepare the following list of them for publication in 'The Ibis.'

I fear the number of species included in this list is not very great; we should doubtless have added a good many more to it if we had not been so engrossed in the pursuit of the Snipe and Ducks. Among the few good things obtained or examined in Olcese's collection at Tangier, I am pleased to be able to record specimens of *Ruticilla moussieri, Cyanecula wolfi* (found wintering in considerable numbers), *Sitta cæsia* (not previously recorded), *Coccothraustes vulgaris, Fringilla cælebs, Garrulus glandarius* × *cervicalis* (the first Jay obtained in Morocco), *Asio otus,* and *Francolinus bicalcaratus.*

1. Turdus viscivorus.

In Mr. Tyrwhitt-Drake's "List of the Birds of Tangier and Eastern Morocco" (Ibis, 1867, p. 426) this species is included in a bracket with *T. musicus* and *T. merula* as "very common;" but Col. Irby (Ornith. Gibr.) merely quotes from Favier's MS. to the effect that it occurs near Tangier "always singly and very sparingly, in company with *T. musicus* on passage;" and though I have paid several visits to Morocco, I never met with it there. I think therefore that the words "on passage" or "during migration" should have been added in Mr. Drake's list; for though a pair remained to nest near Tangier (the nest, with two eggs, having been taken) in the spring of 1884, this was looked upon as a most unusual occurrence by Favier's successor, Olcese, who showed me the eggs as great rarities.

2. Turdus musicus.

Very common in the wild olive-trees everywhere.

3. Turdus iliacus.

Very rare, apparently. Favier only obtained two specimens (Irby, *op. cit.* p. 74). Olcese showed me another, killed near Tangier in the winter of 1884–85.

4. Turdus merula.

Common everywhere.

5. Pratincola rubicola.

Abundant in all suitable localities.

6. Ruticilla moussieri.

Olcese has a specimen obtained near Tangier in May 1884*.

7. Cyanecula wolfi.

Recorded by Mr. Tyrwhitt-Drake as "not rare," but only obtained four times by Favier. I found these birds wintering in considerable numbers on the rushy margin of the lake of Masharalhaddar, my attention being first called to them by their lively movements and by the peculiar way in which they elevated their tails when settled on the ground. I obtained one or two specimens for identification, and saw many others, only finding them, however, among the rushes and reeds near the water's edge.

---

* [Saunders has received examples from the same locality.—Edd.]

8. Erithacus rubecula.

Common. I was rather surprised to meet with this bird in the thickest parts of the "sotos" in the Laraish valley, where the water was over a foot deep under the tangled bushes.

9. Sylvia melanocephala.

Numerous in the wild olive-groves and in the cork-scrub on the hills.

10. Melizophilus undatus.

Not uncommon in the thick scrub at the foot of the hills.

11. Phylloscopus rufus.

Common in the stunted cork-trees on the hills and in the groves of wild olive-trees round the "santos" or tombs, so frequently met with in Morocco.

12. Phylloscopus trochilus.

Obtained in the "sotos" in the Laraish valley.

13. Cettia sericea.

Commonly heard, not often seen, in the thick clumps of bushes in the "sotos," or wooded swamps.

14. Cisticola cursitans.

Very common.

15. Parus teneriffæ.

Common, especially in the olive-groves at Aiacha.

16. Parus major.

A small gathering among some large tamarisk-trees in the Laraish valley. Not observed elsewhere.

17. Sitta cæsia.

Olcese obtained five or six specimens from the "montañas," or low hills, near Tangier. These are the first recorded from Morocco, where neither Mr. Tyrwhitt-Drake nor Col. Irby observed them.

18. Troglodytes parvulus.

Abundant.

19. Motacilla alba.

Numerous everywhere.

20. Motacilla lugubris.

Frequently seen on newly-ploughed land, and one obtained for identification.

21. Motacilla sulphurea.

22. Budytes flavus.

Common, and specimens obtained.

23. Anthus pratensis.

Only too common. These birds proved a constant source of irritation to me, and I vented my wrath in fervent wishes that Cuckoos might lay their eggs in *all* their nests in spring. I hope I am not singular in my dislike of the miserable squeaking little wretches. I shot one out of a small party of four or five on the top of a very high tree near our camp in the Tzelatza valley.

24. Anthus campestris.

I obtained two males from Olcese, which he had killed on the "Marshan," an open plain near his house, in May 1884.

25. Pycnonotus barbatus.

Abundant, and very noisy and inquisitive, in the thick bushes, both in gardens and "sotos."

26. Lanius algeriensis.

Invariably met with wherever there were patches of thick bush affording shelter. They are to be seen a long way off as they sit perched on the topmost twigs.

27. Telephonus erythropterus.

Only one observed, in some dense cork-scrub, in the Tzelatza valley; very shy.

28. Cotile rupestris.

Seen in considerable numbers in the Laraish valley on two consecutive warm sunny days, but not at any other time or place.

29. **Carduelis elegans.**

Very abundant, in flocks, on the plains.

30. **Serinus hortulanus.**

Flocks of this bird met with in the Tzelatza valley.

31. **Coccothraustes vulgaris.**

Undoubtedly rare in Morocco. Olcese had one skin, now in my possession, obtained recently near Tangier. It is somewhat strange that so few should occur here, while the bird is so common across the Straits in Spain.

32. **Passer domesticus.**

Common.

33. **Fringilla cælebs.**

Not obtained by Mr. Tyrwhitt-Drake or Col. Irby. I found them tolerably numerous in one place in the Tzelatza valley and obtained specimens, being rather surprised to hear their familiar *pink-pink* there. Olcese obtained a male near Tangier lately, now in my collection.

34. **Fringilla spodiogena.**

Common everywhere, their note, *tzak-tzak-tzak,* being very striking.

35. **Linota cannabina.**

Not uncommon.

36. **Emberiza miliaria.**

In flocks on all the plains.

37. **Emberiza schœniclus.**

Numerous at the lake of Masharalhaddar, in the rushes near the water, where I obtained several specimens.

38. **Sturnus vulgaris.**

39. **Sturnus unicolor.**

Common.

40. **Pyrrhocorax graculus.**

Olcese recently obtained a number from Tetuan. Not observed by myself.

41. **Garrulus glandarius × cervicalis**[*].

Three were obtained near Tangier in February 1883 by Olcese, one of which I purchased from him. They were shot in the "montañas" to the east of the town, and are, I believe, the first Jays recorded from Morocco.

42. **Corvus monedula.**

Several from near Tetuan, where Mr. Tyrwhitt-Drake met with the species in flocks, are in Olcese's collection. They were procured in February 1883.

43. **Corvus tingitanus.**

Very common. Usually seen in pairs, but a flock of twenty-one passed over us one day. Note, *gok*, *quok*, or *ok*, repeated two or three times, according to individual fancy.

44. **Alauda arvensis.**

Tolerably common.

45. **Alauda cristata.**

Very abundant.

46. **Calandrella brachydactyla.**

Common, in flocks.

47. **Lullula arborea.**

Olcese obtained two, male and female, on the "Marshan" in June 1884. These must have been nesting in the country, I imagine.

---

[*] [Capt. Reid has sent us one of these specimens with a request that we should determine it for him. It seems to belong to a form intermediate between *G. cervicalis* and *G. glandarius*, having the striated head of the latter and the white eye-region of the former. Mr. Dresser, who has also examined the specimen, writes as follows concerning it:—

"I have compared the Jay with my series, and find it certainly very fairly distinguishable from our European *Garrulus glandarius*. It has the crown blacker, the back much greyer, the sides of the head much whiter, and in some respects it reminds one of *Garrulus cervicalis*, but is as different from that species as it is from *G. glandarius*, not having the crown nearly so black, and the rufous on the nape in this bird is of a vinous tinge, whereas in *G. cervicalis* it is of a rusty red. I do not think that it is *G. minor* of Verreaux, because Verreaux wrote me that his bird was merely a small form of *G. glandarius*, and I have several specimens of this latter species no larger than the Tangier bird."—Edd.]

48. Alcedo ispida.

Several times seen in the Laraish valley and near the lake of Masharalhaddar.

49. Coccystes glandarius.

Though I did not myself come across this species, my companion, Capt. Gould, informs me that on a previous visit to the lake of Masharalhaddar, in January 1876, he saw a flock of about twenty in some old fig-trees near the lake, and shot one for identification. The occurrence of the birds in such numbers together appears to be rather extraordinary.

50. Strix flammea.

I only once saw this Owl, a single bird flying out of a dense mass of creepers in a "soto" almost into my face. It is stated by Favier to be "nearly as abundant as *Athene noctua*, inhabiting ruins and holes in rocks" (Irby, *op. cit.* p. 56). Their haunts not being likely spots for Snipe and Ducks, I naturally did not see very many.

51. Asio otus.

One obtained by Olcese in the montañas near Tangier in the summer of 1884. This is, I imagine, the first recorded example from Morocco (Dresser, B. of Europe, vol. v. p. 254).

52. Asio capensis.

Common.

53. Syrnium aluco.

One disturbed in a snug hollow, overgrown with arbutus, myrtle, giant heather, and stunted cork-trees, on the 19th December, 1884. Olcese had a specimen, which I obtained from him, procured on the montañas near Tangier. It is of the grey variety alluded to by Col. Irby (*op. cit.* p. 57).

54. Athene noctua.

Very common and noisy at night. I once walked close past one, uttering its monotonous mewing or crying notes in the middle of the day on the exposed branch of a leafless tree.

55. Circus æruginosus.

Considering the amount of marshy ground visited, I saw very few of these Harriers, and only one was obtained.

56. Circus cineraceus.

Several met with, chiefly males.

57. Buteo desertorum.

Abundant everywhere. One name the Moors had for it was "el dieb," the thief!

58. Nisaetus fasciatus.

Frequently seen. When Partridge-shooting one day in the Tzelatza valley, one of these Eagles made several magnificent stoops at our wounded birds, on one occasion settling in a small tree within thirty yards of the shooting-party.

59. Accipiter nisus.

Not uncommon. I shot two in the marshes with my left barrel in hot pursuit of Snipe wounded by my right, and was not a little surprised to meet with them in such open ground.

60. Milvus ictinus.

These graceful birds often paid a visit to our camp, and circled round it for a considerable time. I did not try to shoot one; but when in Morocco in November 1873, I killed a beautiful male hovering over our small stock of poultry at Sharf-el-Akab.

61. Milvus migrans.

According to Favier (Irby, *op. cit.* p. 48) this Kite does not remain in the vicinity of Tangier during the winter, but I am almost positive I saw several during my recent shooting-trip. My companion, Capt. Gould, an excellent observer, agreed with me on several occasions that the birds we were looking at could be nothing else but Black Kites. We both know the bird well in Spain, and can hardly have been mistaken. I much regret not having obtained an example to make sure, but I did not at the time realize the fact that there was any thing unusual in their presence.

62. ELANUS CÆRULEUS.

Though said by Favier to be scarce near Tangier (Olcese had two specimens, male and female, in his collection), it is certainly common enough down the coast to the south-west. Near Laraish and the lake of Masharalhaddar it was frequently seen suspended like a Kestrel over the open marshes. We saw Kestrels, by the way, on several occasions sadly tormenting these pretty little Kites, which appear to be most peaceful and inoffensive birds.

63. FALCO FELDEGGI.

The Lanner was not uncommon, sailing along the hill-sides and passing high over our heads in its impetuous course. I shot a splendid old male at Aiacha on the 17th January, 1885.

64. FALCO ÆSALON.

Seen once or twice. I had to apply a dose of No. 8 shot one afternoon to a bold little fellow who carried off a dead Snipe under my very nose. He dropped the bird and dashed off, apparently none the worse.

65. TINNUNCULUS ALAUDARIUS.

Very common everywhere.

66. TINNUNCULUS CENCHRIS.

Met with near Laraish, also at Aiacha, where a good many flew past us as we were Partridge-shooting, one of which I shot.

67. PANDION HALIAËTUS.

One seen at the lake of Masharalhaddar on the 29th December, 1884, another in the Straits, near Tangier, on the 25th January, 1885.

68. PHALACROCORAX CARBO.

A good many at Masharalhaddar on the 29th December, 1884.

69. SULA BASSANA.

Common between Gibraltar and Tangier.

70. Ardea cinerea.

Tolerably numerous.

71. Ardea bubulcus.

Very common everywhere. I came across a group of twenty or thirty stick-nests in a thicket in one of the "sotos" in the Bon-Safi valley, which must have belonged to these birds.

72. Ardea garzetta.

Only once satisfactorily identified—at Masharalhaddar, where I crept through the rushes to within a few yards of one before it took flight, the black legs and bill being unmistakable.

73. Botaurus stellaris.

Very common, though more often heard than seen.

74. Ciconia alba.

A familiar object in the marshy plains.

75. Plegadis falcinellus.

Undoubtedly breeds, or has bred, near Tetuan; for Olcese has received the eggs from that district.

76. Phœnicopterus roseus.

A large gathering, perhaps a thousand, at the lake of Masharalhaddar at the end of December, ranged in lines of fifty or more together in the shallow water, and very shy.

77. Mareca penelope.

In countless numbers at Masharalhaddar. Common also in the Koos river above Laraish.

78. Dafila acuta.

Gould and I both identified a small flock of these Ducks at Masharalhaddar, but could not get within shot of them.

79. Anas boscas.

80. Querquedula crecca.

81. Spatula clypeata.

Common, especially in the Laraish valley.

82. Columba palumbus.

Not uncommon in the Tzelatza valley, but not seen in any great numbers.

83. Columba livia.

A large flock frequented a grove of leafless trees in the Tzelatza valley. Many also seen at Aiacha.

We did not meet with *C. œnas* during our visit.

84. Francolinus bicalcaratus.

Though this bird has been received from Mogador, and appears to be common there, it is an interesting fact that Olcese received a consignment of six live ones from near Casa Blanca this winter, and tried hard to keep them alive. They all died, however, probably from the unusual severity of the winter, and were converted into skins, one of which I brought home with me.

85. Caccabis petrosa.

One can hardly find any thing new to say about such a well-known species as this; but it may interest sporting as well as ornithological readers to hear that the coveys we met with on this occasion consisted on an average of eight or ten birds, some being as many as twelve or even thirteen in number; also that the birds we shot appeared to be unusually large and heavy (one weighing 1¾ lb.), and proved to be *excellent* eating, notwithstanding all that has been said to the contrary.

86. Coturnix communis.

Our shooting-grounds did not lie in places suited to the Quail, and, though doubtless not uncommon, we only once met with the species in the Tzelatza valley, where I shot a solitary bird among some dry thistle-beds.

87. Turnix sylvatica.

Not identified during our visit; but I include this species in my list as, on a former occasion, in November 1873, I shot several at Sharf-el-Akab, about twelve miles from Tangier.

88. Porphyrio cæruleus.

We were very much astonished at not seeing this bird in the marshes and "sotos," especially as we very often heard its call-note. The Moors invariably concluded that we could only be fools enough to flounder about in the mud and water in pursuit of this handsome bird; they do not see the object of shooting such a miserable little creature as a Snipe. The local name of the Purple Waterhen varied from "Kazeid" to "Kongeid," and we never heard the name "Kazir," given by Favier (Irby, *op. cit.* p. 146).

89. Gallinula chloropus.

Tolerably common. It is somewhat odd that we never obtained any Rails or Crakes, and only saw one bird belonging to the family, probably *Porzana maruetta*, at Masharalhaddar.

90. Grus communis.

A good many seen, usually on the wing in small flocks, very noisy.

91. Grus virgo.

A pair of birds seen on several occasions by Capt. Gould and myself when Duck-shooting in the marshes in the Laraish valley were unhesitatingly recorded in my diary under the above head. I do not think we could have been mistaken, as the birds passed within 200 yards of us once or twice; still, seeing is not believing, and the bird being apparently of rare occurrence in Morocco, I can only give the note for what it may be worth.

92. Otis tarda.

Olcese has a small specimen, a female, obtained recently near Tangier. Capt. Gould informs me that in January 1875 he saw and vainly pursued three Great Bustards near Masharalhaddar.

93. Œdicnemus scolopax.

Common on the plains in small flocks. Once seen in a larger flock of about fifty birds.

94. Charadrius pluvialis.

Very common on the plains.

95. SQUATAROLA HELVETICA.

One obtained from Olcese, a male, in perfect summer plumage, had been shot near Tangier on the 20th June, 1883.

96. VANELLUS VULGARIS.

Very abundant everywhere.

97. HIMANTOPUS CANDIDUS.

Favier states (Irby, *op. cit.* p. 164) that this bird is not found near Tangier. I shot three in November 1873 in the marshes at Sharf-el-Akab, only twelve miles from Tangier.

98. SCOLOPAX RUSTICULA.

99. GALLINAGO CŒLESTIS.

100. LIMNOCRYPTES GALLINULA.

Common in suitable places.

101. TRINGOIDES HYPOLEUCUS.

Frequently seen, especially on the banks of the tidal river Koos, near Laraish.

102. HELODROMAS OCHROPUS.

We met with the Green Sandpiper repeatedly.

103. TOTANUS CALIDRIS.

Abundant in the Laraish valley, and universally distributed.

104. LIMOSA ÆGOCEPHALA.

Only one recorded by us, in a small freshwater lagoon near El Hemis.

105. NUMENIUS ARQUATA.

Very common at Masharalhaddar, also in the Laraish valley.

106. NUMENIUS TENUIROSTRIS.

Abundant in the Laraish valley, where I obtained specimens from flocks numbering from twenty to a hundred. Numerous flocks also met with at Masharalhaddar. The note is like that of *N. arquata* ("cur-wee, cur-wee"), but not so loud or musical.

We did not identify the Whimbrel, *N. phæopus*, during our stay. Favier is doubtless correct in stating that it does not remain in the vicinity of Tangier during the winter.

107. STERNA FLUVIATILIS.

A few of these Terns were fishing in the shallow water at Masharalhaddar on the 29th December, 1884.

108. RISSA TRIDACTYLA.

Common in the Straits in December and January.

109. LARUS ARGENTATUS.

Common at Gibraltar, also noted at Masharalhaddar.

110. LARUS FUSCUS.
111. LARUS RIDIBUNDUS.

Very abundant.

112. LARUS MINUTUS.

While vainly endeavouring to get within shot of the swarms of Wigeon, Mallard, Teal, &c. at Masharalhaddar in a clumsy Moorish boat, built of bundles of reeds and propelled from behind by a nude Moor up to his shoulders in the lake, I found myself accompanied or, rather, preceded for some distance by a flock of about a dozen Little Gulls. I took very little notice of them at first, thinking they were *L. ridibundus*; but my attention was soon excited by their small size and airy flight, and I watched them carefully, not daring, unfortunately, to shoot one, for fear of spoiling my chance at the Ducks. They passed sometimes within a few yards of the boat.

113. PROCELLARIA LEUCORRHOA.

Olcese has a specimen of the Fork-tailed Petrel, recently picked up dead on the beach near Tangier.

114. PUFFINUS ANGLORUM.

I noticed a great many Shearwaters, as usual, in the Straits on the voyages to and from Tangier, but could not identify any to my satisfaction. There seemed, however, to be no doubt about this species, and a larger one was certainly

P. kuhlii, while (as noticed by Col. Irby) there appeared to be another, though what it may be I am unable to suggest.

115. PODICEPS CRISTATUS.

Common at Masharalhaddar at the end of December.

116. PODICEPS NIGRICOLLIS.

A pair seen in company with *P. cristatus* at Masharalhaddar.

117. TACHYBAPTES FLUVIATILIS.

Common at Masharalhaddar and on the river which falls into this lake, as well as in all other suitable localities.

118. ALCA TORDA.

Abundant in Gibraltar Bay and in the Straits.

XXII.—*On the Geographical Distribution of Birds in European Russia north of the Caucasus.*—Part II. Rapaces Nocturnæ*. By M. MENZBIER.

STRIX FLAMMEA.

Like the Common Buzzard and Red Kite, the Barn-Owl is distributed only throughout the western and south-western parts of Russia.

It is resident in Courland and is not uncommon in Poland, but we do not know any thing of its breeding in the Upper valley of the Dnieper. According to the testimony of many of our ornithologists the Barn-Owl is a rare resident in the Governments of Kharkov and Kiev, more commonly distributed in the Government of Podolia, and numerous enough in Bessarabia. East of the last-mentioned locality it only occasionally occurs in the steppes of New Russia, probably as far east as the Lower Dnieper. In Central Russia this species is a very rare resident, except in the Government of Orel, whence it strays into the southern part of the Government of Tula.

SYRNIUM LAPPONICUM.

The Lapp Owl breeds regularly in the extreme north of the large expanse of the forest country or the "Taiga," but only accidentally further south.

---

* Continued from 'Ibis,' 1884, p. 315.

It is resident in Lapland and Finland as far south as lat. 67°, but in the southern portions of that country it is said to be found only during the winter. It has been frequently obtained in the Government of St. Petersburg, and it is a resident in the large forests near Lake Peypus (lat. 59°). It is found and perhaps breeds in the eastern parts of the Government of Pskov, and, according to Mr. Dzieduszycky, breeds in the district of Dzisniensk, in the Government of Vilna (lat. 55½°). In the Government of Minsk and in other parts of Lithuania it is said to breed by Mr. Tyzenhaus, who informs us that it has several times been observed in the Governments of Grodno and Lublin; consequently we must study the breeding-range of the bird in North-western and Western Russia more carefully, this country being very interesting from a zoo-geographical point of view. During the winters of 1866 and 1881 the Lapp Owl was found near Moscow, and in one instance it was obtained at the same season in the Government of Orel.

East of Finland it is not rare near Archangel, and it is found near Ustug and in the Government of Vologda, but nothing is known of its breeding-range in the country between the Dvina river and the Ural. In the last-mentioned locality the bird was obtained about 30 versts from Polevsky Lavod, and, according to Mr. Pleske, during the winter of 1872 was obtained in Tevkelevsky Khutar, only 13 versts from Orenburg. It is very possible that it breeds in the Ural Mountains more to the south than we know of at present.

SYRNIUM URALENSE.

The Ural Owl is common and resident in all the forests of Northern Russia; it is also a local breeding bird in Central Russia, and in some instances has been found as far south as lat. 54°–53°.

It is more or less common and resident in all parts of Finland and Lapland, from the Gulf of Finland in the south to the limit of forest-growth in the north. More to the east the Ural Owl is not uncommon near Archangel, Pinega, and in the large forests of the Governments of Vologda, Wjatka, and Perm; but we do not know its northern breeding-limit in the country near the Petchora. According to Mr. Bogdanow, this bird breeds regularly throughout the country of the Middle Volga, from the mouth of the Kama river to the Samarskaja Luka; but more to the west, in Central Russia, the Ural Owl does not go so far south, and has been found in this direction only in the Governments of Kostroma and Moscow. In Western Russia it is not rare in the Governments of Novgorod and Pskov, and breeds throughout the forests of the Baltic Provinces; but on the testimony of Mr. Taczanowsky it is very rare in Poland. According to Mr. Eichwald the Ural Owl is resident in the Government of Minsk, and according to Mr. Tyzenhaus it breeds throughout Lithuania.

During the winter this bird has been occasionally seen in the woods of the Obschy-Syrt as well as in the Governments of Jaroslav and Moscow.

ULULA ALUCO.

The Tawny Owl is distributed throughout the woods of Central and Southern Russia as far north as lat. 60°–61°, and as far east as the eastern slopes of the Ural Mountains.

In Finland this bird is extremely rare, being found only on the north-western coast of the Gulf of Finland. In some parts of the Government of St. Petersburg it is not uncommon. In the Government of Novgorod the Tawny Owl has hitherto been observed only in the southern portion of the country. More to the east, in the Governments of Jaroslav and Kostroma, as well as in most parts of the Governments of Wjatka and Perm, this bird is one of the commonest Owls; but on the eastern slopes of the Ural Mountains, which are about its eastern breeding-limit, it is very rare. On the wooded spurs of the Ural, in the forests near the Volga, in Central and Southern Russia, in Lithuania, in Poland, and in the Baltic Provinces this species is very common, but it is only found occasionally in the steppes of New Russia.

According to Mr. Shatilov, the Tawny Owl breeds in the mountains of the Crimea.

ASIO OTUS.

The Long-eared Owl is distributed throughout almost the whole of Russia with the exception of the more northern part of the country.

In Finland it breeds as far north as lat. 63°, but is common only near the Gulf of Finland, on the Oeland Islands, and near Lake Ladoga. In the Government of Archangel the Long-eared Owl is very rare, though it has been several times obtained there, especially near Archangel. More to the east, in the country between the Dvina and the Kama, its northern breeding-limit is more south, and in the Ural Mountains this Owl has been found only as far north as lat. 58°–59°. It is very common throughout the whole of Central Russia, not uncommon in the woods of Southern Russia, and is found also on the northern slopes of the Caucasus.

In the Crimea this bird is met with only during the winter.

ASIO ACCIPITRINUS.

The Short-eared Owl is distributed throughout Russia, from the extreme north to the southern limit of the country, where it breeds in the Crimea, as well as in the steppes of the Government of Stauropol, and in the valleys of the Terek and the Kuban.

In Central and Southern Russia a few may be seen in winter.

NYCTALE TENGMALMI.

Tengmalm's Owl is a very typical member of the avifauna of Northern Russia, and breeds throughout the forest-country as far south as the southern limit of the pine-forests (*Pinus sylvestris*).

It is common and resident almost throughout Finland, as well as near Lakes Ladoga and Onega, and in Karelia; but in Northern Finland and in Lapland it is rare, though found nearly as far north as the limit of forest-growth. In the country about the Dvina it is common as far as Archangel; but more to the east, in the Governments of Vologda, Wjatka, and Perm, its northern breeding-limit trends from N.N.W. to S.S.E. and in the Ural Mountains, according to Mr. Sabanaev, this Owl is found only as far north as lat. 59°. Its southern breeding-limit is still insufficiently known; but according to Eversmann it still nests in the woods of the northern part of the Governments of Orenburg and Saratov. We know nothing as to the distribution of this bird in the Governments of Penza and Tambov, but it is common in the Government of Riazan; not uncommon in the northern part of the Government of Tula; and is found throughout all the forest-country from the Gulf of Finland in the north to the country about the Pripet river in the south, as well as in Poland. Russow states that it rarely breeds in the Baltic Provinces.

During the winter this Owl strays as far south as Guriev, and is not uncommon in the woods of Southern Russia.

Messrs. Carte, Blakiston, and Shatilov include Tengmalm's Owl in their respective lists of the birds of the Crimea. But neither Carte nor Blakiston obtained skins for identification, and all the specimens of the supposed *Nyctale tengmalmi* in Shatilov's collection are merely darkly coloured examples of *Athene noctua*.

ATHENE NOCTUA.

The Little Owl is very common in Southern and in some parts of Central Russia, but in the northern parts of Central Russia it is very rare.

We do not know its northern breeding-limit in the Baltic Provinces, but it probably breeds in the south-western part of Courland, as it is found in the Government of Grodno and is common in Poland. Its distribution in the valley of the Upper Dnieper is still unknown; but in Central Russia it breeds in the southern part of the Government of Tula, as well as in the Government of Riazan, and is occasionally found near Moscow. More to the east it inhabits the Governments of Penza, Simbirsk, and Orenburg; but we do not know the eastern and southern breeding-limit of this species between the Lower Volga and the Ural Mountains, and it is very possible that near the Caspian Sea *Athene noctua* may be replaced by *Athene orientalis*.

In Southern Russia, from the Volga to the northern slopes of the Caucasus and Bessarabia, the Little Owl is very common and partially resident.

In the Crimea *Athene noctua* is very common, but the specimens procured in that country differ from those of Central Russia in being more greyish brown, like *Athene meridionalis*.

GLAUCIDIUM PASSERINUM.

The Pygmy Owl is distributed throughout the northern forests of Russia. Generally it is resident, but the birds of the extreme north winter in Central Russia.

In Finland it is found as far north as lat. 68½°, but it is rare near the northern limit of its breeding-range; and though it occasionally occurs near Archangel, it is not found in the valley of the Petchora. In the Ural Mountains it occurs only as far north as Ekaterinburg. Further south it breeds in the forests of the northern part of the Government of Orenburg, in the Government of Kazan, and generally in the country of the Middle Volga as far south as the Government of Simbirsk. It is common in the Government of Vologda and in Finland, but rarer in the Governments of St. Petersburg, Tver, Jaroslav, Moscow, in the Baltic Provinces, in Poland, and in Lithuania. In the central portions of Russia the Pygmy Owl is said to be resident in the Government of Riazan; but in the Governments of Tula and Orel it is found only during the winter migration.

SURNIA ULULA.

Like *Nyctale tengmalmi* and *Glaucidium passerinum*, the Hawk-Owl is an inhabitant of the northern forest-country or "Taiga"; but it ranges further north than either of these birds, as far as the limit of forest-growth.

In the Kola Peninsula this bird is found up to lat. 67°–68°, and in the country between the White Sea and the Ural Mountains as far north as lat. 66°–67°. Throughout the forests of Northern Russia, from the Gulf of Bothnia in the west to the Ural Mountains in the east, the Hawk-Owl is a common resident; but its southern breeding-range being still insufficiently known, I can only enumerate some of its breeding-localities in Central Russia. According to Eversman the Hawk-Owl is not rare in the southern forests of the Ural Mountains, in the woods of the northern part of the Government of Orenburg, and throughout all the Government of Kazan. It probably breeds in the northern part of the Government of Riazan, and undoubtedly in the Government of Moscow, in the northern part of the Government of Tula, and in the Government of Smolensk. In the wooded country between the Gulf of Finland and the Upper Dnieper this Owl is not uncommon; but Russow states that it only occasionally breeds in the Baltic Provinces. Mr. Tyzenhaus informs us that this bird is resident and not uncommon in Lithuania, and Taczanowsky says that it occurs in Poland during the winter.

In winter the Hawk-Owl strays as far south as lat. 49°–48°.

NYCTEA SCANDIACA.

The Snowy Owl is a bird of the tundra and of the large marshes dispersed through the northern forests. More to the south it breeds only irregularly and very rarely.

It is common and partially resident on the islands of Novaja Zemlja, on Waigatz, and throughout the Kola Peninsula, from the Varanger fiord in the north as far south as lat. 67°. In the country near the White Sea it breeds near the town of Onega, near Archangel, on the Kaninskaja tundra, in the neighbourhood of Pinega and Mezen. In the valley of the Lower Petchora this species was found as far south as Ust-Zylma, and the Ural Expedition observed it between lat. 68° and lat. 70°. Mr. Sabanaev informs us that this bird breeds in the Ural Mountains as far south as lat. 56°; but this information is very doubtful, as well as his statements respecting the breeding of the Snowy Owl in some districts of the Governments of Jaroslav, Moscow, and Orel (*fide* Mr. Evreinov). Neither Mr. Lorenz nor I obtained this species in the last-mentioned localities during the breeding-season, though it is common enough there during the winter. In exceptional cases the Snowy Owl breeds in the Government of St. Petersburg and in Livonia.

During the winter the Snowy Owl is distributed throughout the whole of Russia, as far south as the shores of the Caspian Sea and Taganrog on the Sea of Azov.

Bubo maximus.

The Great Horned Owl is distributed throughout Russia with the exception of the tundra, but it is nowhere very common in our country. The specimens of this bird procured east of the Volga differ from those of Central and Western Russia in being paler and whiter, like the Siberian Great Horned Owl; but the veritable *Bubo maximus* var. *sibirica* occurs only east of the Ural Mountains. In Bashkiria the pale variety of the Great Horned Owl meets with the pale variety of the Central-Asiatic *Bubo turcomanus*. The south-eastern limit of the distribution of *B. maximus* in the country between the Upper Ural river and the mouth of the Volga is still unknown.

Bubo turcomanus.

Some ornithologists confound *Bubo turcomanus,* Eversm., with *Bubo sibiricus,* Licht., and on this ground connect the former with *Bubo maximus.* This confusion has arisen from the fact that the pale variety of *Bubo turcomanus,* which is probably only a climatic variety of the Central-Asiatic bird, bears a superficial resemblance to the Siberian form of *Bubo maximus* ; but the dimensions and the character of the coloration of the two birds are very different. Both in their pale varieties and in the typical forms, *B. turcomanus* is not so large as *B. maximus,* and has not the large longitudinal black streaks on the lower breast and abdomen. Typical specimens of *B. turcomanus* being very similar to *B. ascalaphus,* it seems to me that this bird is an intermediate form between *B. maximus* and *B. ascalaphus.*

The geographical distribution of the Turcoman Great Horned Owl is as follows—the south-western part of Siberia as far north as lat. 51° (Upper Uralsk), where this bird meets with the Siberian Great Horned Owl, Ust-Urt, Russian and Eastern Turkestan, and the Pamir. Skins of *B. turcomanus* obtained near Irkutsk and Kultuk were received by us from the late Mr. Shvedov. It is probably the same species of Great Horned Owl which inhabits Tibet and the highlands of Persia.

The north-western limit of the breeding-range of *Bubo turcomanus*, between the Lower Volga and Upper Ural, is still unknown. Probably the ranges of the two species overlap in that country.

SCOPS GIU.

The Scops Owl is commonly distributed in South-eastern Russia; it is rare in the southern and south-western portions and is very local in the central governments.

It breeds commonly in the forests of the Southern Ural, and in the outlying spurs between the Sakmara and Tandyk rivers; it is not uncommon in the forests near the Ural river and the Lower Volga, but is very rare near Astrakhan, where it is said to be a resident.

We do not know any thing of its distribution in the Governments of Ekaterinoslav and Kherson, nor of its breeding-range in the Governments of Kursk, Chernigov, and Smolensk; but it is a very common resident in the Crimea, and it breeds in Bessarabia, the Government of Kiev, the Government of Orel, the southern portion of the Government of Tula, and probably in the district of Laraisk in the Government of Riazan. According to Mr. Taczanowsky it is a rare resident in Poland and Lithuania.

During migration this bird is very common near Guriev (at the mouth of the Ural river).

XXIII.—*Notes on the Breeding-habits of certain Sea-Birds frequenting Norfolk Island and the adjoining Islets.* By W. M. CROWFOOT, M.D.

FOR the following notes I am indebted to my friend Mr. P.

Metcalfe, Resident Medical Officer at Norfolk Island. The skins of the Terns which accompanied the eggs were kindly identified for me by Mr. Saunders, the Petrels by Mr. Salvin, and the other birds by Mr. Sharpe.

ANOUS STOLIDUS (Linn.). Noddy Tern.

This bird breeds on Philip and Nepean Islands and the adjacent rocks. Philip Island is a small uninhabited rocky island lying about four and a half miles S.S.E. of Norfolk Island. Nepean Island, also lying to the S.S.E. of Norfolk Island, and half a mile distant from it, is a flat barren rock covered with sand. The Noddies begin to lay about a month after the Sooty Terns, *i. e.* in October, though a few eggs may be found earlier. The eggs are not laid in large colonies, but here and there, in convenient spots, all over the island. The Noddy always makes some kind of nest; I have seen it made of dry grass, bits of sea-weed, dry sticks or twigs, and fish-bones. As a rule, there is nothing but a basement made. The material is merely laid in a heap, as it were, in a shallow hollow, and the egg, only one, is laid thereon. In one instance I found a considerable attempt at building a nest on the top of a dead tree-stump, about 3 feet from the ground; it consisted of a mass of grass, twigs, and sea-weed, but there was no interweaving of the materials, and it resembled the base of a common English Blackbird's nest after the nest itself has been taken and the foundation left. The bird was sitting when I saw it. Noddies' eggs vary very little in appearance and size: the yolk is bright yellow. The breeding-time lasts from the beginning of October till January. The eggs may occasionally be obtained till the end of that month, but the greatest number are laid in October and November. The nests may be placed on sand, rock, tree-stumps, or grass; but sandy spots are the ones most frequently selected. I have never seen more than one egg in a nest.

ANOUS MELANOGENYS, G. R. Gr.

The smaller Noddy Tern is called by the Norfolk-Islanders the "Titissack," from the noise it makes. This bird breeds on Norfolk and Philip Islands, but not on Nepean Island, as there are no trees there. It makes a beautiful slightly cupped little nest of fresh sea-weed, which it firmly cements to the bough of a tree. The nests are placed all along the boughs, sometimes six or more on the same bough a short distance apart, and in the forks as well. One egg only is laid in each nest. The birds are very tame, and may be taken off their nests, though they strike hard with their bills at intruders. The larger Noddy and the Sooty Terns, on the other hand, will not allow themselves to be taken off their eggs, nor can they be caught, though they come so near as to be readily knocked over with a stick or stone. The eggs of *A. melanogenys* vary but little; they measure 1·75 inch by 1·25, and much resemble Noddies' eggs in colour and markings. The tree on which I have always seen the nests of this bird placed is the white oak (*Lagunaria patersoni*). I have seen them on small trees growing on the coast, a few feet above the sea, and fully exposed to the wind; but the site usually chosen is a sheltered valley about half a mile from the sea.

ANOUS CINEREUS, Gould.

These Grey Terns, called by the Norfolk-Islanders the "Little Blue Petrel," are fairly numerous during the breeding-season. They lay their eggs on Philip and Nepean Islands and the neighbouring rocks. The eggs are usually placed on inaccessible ledges, but often on the sand, sometimes not many feet above the sea, but usually at from 80 to 2000 feet. They make no attempt at a nest, and lay only one egg, which is the most easily broken of all the sea-birds' eggs found on these islands. The eggs much resemble those of the other species of Noddy, but the ground-colour is rather darker, and the spots are numerous, small, and more generally distributed over the whole surface than in the eggs of the other species. They measure on an average 1·6 inch in length by 1·12 in breadth, and vary but little either in size or in markings. These birds do not, as a rule, lay in colonies, but here and there, like the larger Noddy, though sometimes one comes across a number close together on the sand. The nestlings are almost of the same colour as the parent birds. These Terns are not tame, and cannot be taken off the nests like *A. melanogenys*. I have taken the eggs as early as the 26th of September, but I think they begin to lay sooner, and I found an egg incubated on Philip Island on June 15th, so that the breeding-period extends from September to January for certain. The birds frequent these islands all the year round.

STERNA FULIGINOSA, Gm.

The Sooty Tern, or "Whale-bird" of the islanders, is the commonest sea-bird here. It commences to lay in September, and breeds in colonies, generally on the sand. The eggs are sometimes laid so close to each other that one can hardly walk between them; they are also laid on ledges of rock, but generally near the water. On Philip Island there is a bit of sandy beach which is always covered with these birds. Occasionally one sees an attempt at a nest, such as a few twigs or dry grass in a little heap under the egg; but generally they are placed on the bare sand. One egg only is laid. These eggs vary greatly, both in size and colour. On an average they measure 2·1 inches by 1·4, but two specimens, which were distinctly double-yolked, measured 2·5 inches by 1·55. A few specimens out of a series of nearly one hundred are white, with a faint tinge of green, and without any spots or markings of any kind; but most of them are richly marked with reddish-brown spots and blotches. The yolk is of a deep red colour, and this character will always serve to distinguish these eggs, when fresh, from those of the Noddy Tern, of which the yolk is bright yellow.

GYGIS CANDIDA (Gm.).

The "Little White Sea-bird" of the Norfolk-Islanders is a very interesting bird. It is said in some places to breed in colonies, but it certainly does not do so here. It lays its egg on trees, and here and there one finds two or three trees occupied in the same valley. I have seen eleven trees used in one locality; but I never saw two eggs on one tree, though

I have seen them on adjoining trees. The egg is laid on the bare branch, sometimes in a slight depression or against a piece of roughened bark; once I have seen it in a fork. Generally it lays its egg on an outstanding branch, and balances it in a truly wonderful manner. There is not a trace of a nest, and often not even of a depression. One egg only is laid. I have seen it placed on a branch about 20 feet from the ground, and also at a height of 60 feet or more; 30 to 40 feet is, perhaps, the average height at which it lays. It always chooses a sheltered situation, generally in a valley, and at a variable distance from the sea, from 300 to 800 yards in the cases I have seen. Year after year this bird lays on the same tree, on the same branch, aye, and on the same spot on the branch. There is one tree where I have seen the old bird sitting once last year and twice this year, for I got both eggs. The first I took on the 27th of December, 1883. It was incubated. The second was all but quite fresh on the 25th of January, 1884. In four other trees I have also found eggs on the same spots as I found eggs or young birds last year. These Terns are very tame, and in one case we lifted up the bird to take the egg. It is interesting to watch the careful way in which the old bird gets off her egg when going to fly. The young birds are very comical-looking little objects. I have found the eggs on three different kind of trees, viz. the white oak (*Lagunaria patersoni*), the iron-wood (*Notelæa longifolia*), and the blood-wood (*Baloghia lucida*). How do the eggs and young birds keep on in windy weather? In November 1882 I was looking for a specimen to send to you, and seeing one on a tree, I shot it. I was sorry to see, when it fell, that a young one was under it. However, this year I found another bird sitting on an egg in the same spot. I took the egg, and four weeks afterwards I went back and again the bird was sitting on another egg, which I also took. I am told that this bird nests extensively on banyan-trees in Pitcairn's Island. The eggs vary in length from 1·62 inch to 1·87, and from 1·17 inch to 1·40 in breadth. They are oval in shape, and generally large at both ends. The ground-colour varies from creamy white to buff. They have underlying markings of a grey colour, and are streaked and blotched with light and dark brown. They somewhat resemble in colour some varieties of the eggs of the Stone-Curlew.

PHAETON RUBRICAUDA (Bodd.). The Tropic-bird.

This bird breeds on Norfolk Island, Nepean Island, and Philip Island, but the last-mentioned island is its principal resort, and here it may be counted by hundreds. It lays its single egg on ledges of rock, in cracks of the cliffs, under overhanging boulders, and in such-like situations. The bird defends its egg with its strong beak, and may be easily caught on the nest. On Norfolk Island the eggs are difficult to get, but on Philip Island they may be readily obtained. The young Tropic-bird is a curious-looking object, being completely covered with thick snow-white down. The eggs vary in length from 2·65 inches to 2·85, and in breadth from 1·75 inches to 2·16. They have a reddish-brown ground-colour, and are covered all over with fine dark reddish and violet-brown markings. Some have the colouring-matter apparently partially washed off.

PUFFINUS SPHENURUS, Gould.

This Petrel, called by the Norfolk-Islanders "Mutton-bird" or "Ghost-bird," from its child-like cry at night, lays its egg on Norfolk, Philip, and Nepean Islands. Its breeding-period extends over a considerable time. I have seen young birds nearly fledged on the 27th of October, and have obtained fresh eggs on the 15th of January. This bird digs out a hole in the soft soil on the faces of the cliffs, also in the sand on flat ground. Some of the burrows are six feet and more in length. The bird also lays extensively on Philip Island in shallow recesses under overhanging boulders and in colonies, *i.e.* many may be found close together. On Norfolk Island its holes are always isolated and the burrows deep. One egg only is laid. Both bird and egg have a very strong peculiar smell, and I can usually tell a fresh hole from an old one by the smell of the entrance. There is no nest. The eggs, which are pure white, vary from 2·5 inches to 2·75 in length, and from 1·5 inch to 1·75 in breadth. Some are equally rounded at both ends; others are much pointed at one end.

PUFFINUS ASSIMILIS, Gould.

Of this bird, the Norfolk-Island name of which is "Lao," I know but little. The eggs are white and like those of the Mutton-bird, but smaller. The egg is laid in a recess or shallow hole under an overhanging rock, but always, I believe, on sand. There is no nest, and one egg only is laid. I have seen only three birds of this species, and found one egg myself in a solitary recess on sand under an overhanging rock. The bird was very shy. I believe this species to be scarce here. It breeds on Philip and Nepean Islands and on outstanding rocks. The single egg which I found measures 2·1 inches in length by 1·3 in breadth; it is long and narrow, and more or less pointed at both ends.

SULA PERSONATA, Gould.

This Gannet breeds on Nepean and Philip Islands, but not on Norfolk Island. It makes no nest, except that it sometimes places a few dry grass-stalks or rushes under its eggs. As a rule the eggs are laid on the ground, and are usually two in number. This is the only sea-bird breeding on these islands that lays more than one egg.

The Gannet commences laying certainly in the earlier part of October, as I have seen a young bird upwards of a week old on the 27th of that month. I have also obtained a fresh egg in the first week of January. The young Gannet is, when fledged, much darker in colour on the wings and back than the parent. The old birds are very tame, and have to be driven off their eggs, but they peck sharply at intruders with their formidable beaks. The eggs vary from 2·5 inches to 2·75 in length, and from 1·75 to 1·9 in breadth. They have a greenish-white ground-colour and chalky-white coating, like those of the Common Gannet. Some specimens are much stained with brown colouring-matter, probably derived from the nest-materials or the soil on which they are laid.

Other Norfolk-Island birds sent by Mr. Metcalfe, and identified for me by Mr. Sharpe are:—*Petrœca multicolor* (Gm.); *Eudynamys taitensis* (Sparrm.); *Ninox maculata* (Vig.); *Aplonis fuscus*, Gould; *Ægialitis bicincta*, Jerd.; *Porphyrio melanotus*, Temm.; *Rhipidura pelzelni*, Gm.; *Zosterops tenuirostris*, Gould; *Gerygone modesta*, Pelz.; *Symmorphus leucopygius*, Gould; and *Pachycephala xanthoprocta*, Gould. I hope in time to have sufficient materials for a paper on the land-birds of Norfolk Island.

XXIV.—*On the Cormorants of Japan and China.*

By Henry Seebohm.

The numerous collections of Japanese birds recently sent to this country have enabled me to amass a series large enough to clear up some of the difficulties which have hitherto presented themselves in an attempt to unravel the tangle into which the Cormorants of China and Japan have fallen.

Temminck and Schlegel, in the 'Fauna Japonica,' enumerate three:—

1. *Carbo cormoranus.*
2. ,, *filamentosus* vel *capillatus.*
3. ,, *bicristatus.*

The second in this list bears the former name in the text, and the latter on the plates; but Schlegel, in his 'Muséum d'Histoire Naturelle des Pays-Bas,' gave up the species (incorrectly, as I hope to show presently), and treated both names as synonyms of the Common Cormorant.

Swinhoe accepted Schlegel's union of No. 1 and No. 2 under the name of *Phalacrocorax carbo*, and in 1871 called No. 3 *Graculus bicristatus*, after having in 1867 described it as new under the name of *Phalacrocorax æolus*; but in 1874 he identified this supposed new species as *P. pelagicus*.

The conclusions at which I have arrived are that there are three Cormorants found in China and Japan.

PHALACROCORAX CARBO.

The Common Cormorant appears to breed in Japan and North China and to winter in South China. It may at once be recognized by its white gorget, and by the colour of the scapulars and wing-coverts, which are bronzy brown margined with black.

Phalacrocorax capillatus.

Of Temminck's Cormorant I have skins of five adults, besides those of several immature birds. The dated adults are—Amoy, Feb.; Amoy, April; Hakodadi, Feb.: so that we may assume it to be a resident in both China and Japan. It is an excellent species. Like the Common Cormorant it has fourteen tail-feathers, but it is a slightly larger bird; the gorget is profusely streaked with greenish black, and the scapulars and wing-coverts are bronzy green narrowly margined with black as in the Shag.

Phalacrocorax pelagicus.

The Violet-green Cormorant is really a Shag, having only twelve tail-feathers. I have summer examples from Kamtschatka, Japan, and North China (Cheefoo), and winter examples from South China (Amoy). None of the feathers of the back, which are metallic green, or the scapulars, which are metallic violet, have any black margin, and in all the skins the frontal feathers extend to the base of the bill.

P. bicristatus (Pall.), which appears to be identical with *P. urile* (Gmel.), has the forehead bare of feathers. There is no evidence that it has ever occurred in China or Japan, though it has been recorded from Kamtschatka.

XXV.—*On some little-known Species of Tanagers.*

By P. L. Sclater, M.A., Ph.D., F.R.S.

(Plate VI.)

Having been favoured by friends in other countries with the loan of the typical specimens of some little-known species of Tanagers, in aid of a fresh revision of the group upon which I am now engaged, I wish to record a few observations on these interesting specimens before I return them to their respective owners.

1. Euphonia purpurea.

Euphonia purpurea, Lawrence, Ann. Lyc. N. Y. vol. viii. p. 466 (1867).

I cannot separate this species, of which the type has been kindly lent to me by its describer, from *E. violacea* of Cayenne. It agrees very well with skins of that species from Cayenne in my collection.

It is possible that Mr. Lawrence may have compared it with the Brazilian subspecies *Euph. violacea lichtensteini.*

2. Phœnicothraupis peruvianus.

Phœnicothraupis peruvianus, Tacz. Orn. du Pér. ii. p. 198.

M. Taczanowski has kindly sent me the typical specimen of this species for comparison. It is an adult male, obtained by M. Stolzmann at Monterico. It is rather more rosy below than the type of *P. rhodinolæma* of Salvin and Godman (Biol. Centr.-Am. Aves, i. p. 300), obtained at Sarayacu, Ecuador, by Buckley; but I do not think these two species can be fairly separated, and the last-mentioned name has a slight priority in point of date.

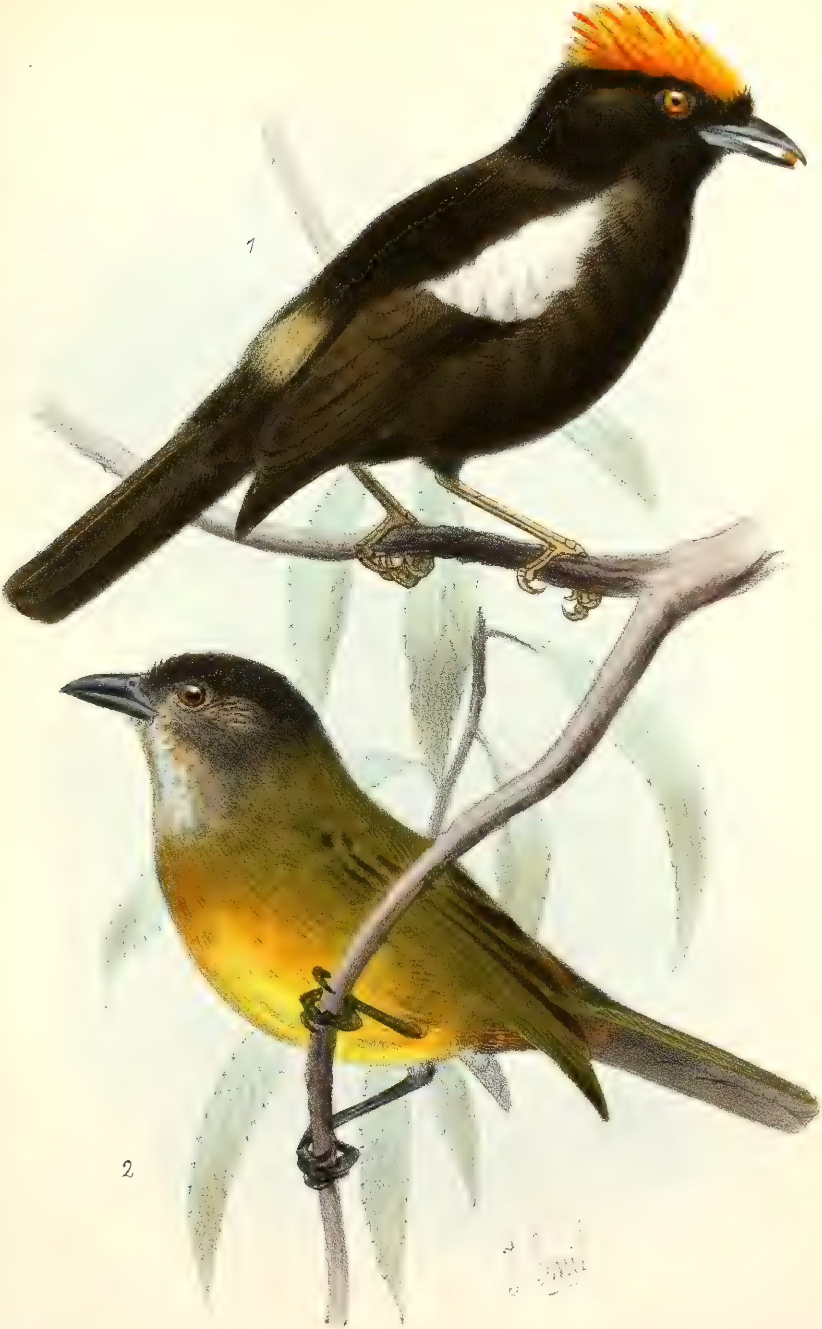
3. Lanio lawrencii, sp. nov. (Plate VI. fig. 2.)

Tachyphonus atricapillus, Lawr. Proc. Acad. Sc. Phil. 1868, p. 360.

Above olive-green, with indications of black coming out on the interscapulium; wings and tail brownish black, edged with olive; upper surface of head and nape black; sides of head greyish; throat greyish white; middle of abdomen ferruginous orange; sides passing into olive; under wing-coverts white; bill blackish, pale at the base below; feet clear brown. Whole length 4·8, wing 2·4, tail 2·2 inches.

Hab. Trinidad (*Alexander*).

Obs. Mr. Lawrence having kindly sent me his unique example of this species for examination, I have come to the conclusion that it is a young male of a new species of *Lanio*, allied to *L. versicolor,* and remarkable for its small size. As in *L. versicolor,* there is scarcely more than an indication of a commissural tooth. There being already a *Lanio atrica-*



J Smit lith

Hanhart imp.

1. TACHYPHONUS NATTERERI, ♂.
2 LANIO LAWRENCII jr.

pillus, I propose to change the name of this species to *Lanio lawrencii.*

4. TACHYPHONUS NAPENSIS.

Tachyphonus napensis, Lawrence, Ann. Lyc. N. Y. viii. p. 42.

I have carefully compared Mr. Lawrence's type of this species (which is apparently an Indian skin from the Rio Napo) with the series of *T. surinamus* in my collection and that of Messrs. Salvin and Godman. As Mr. Salvin and I have already pointed out (P. Z. S. 1867, p. 571), the Upper Amazonian form of this bird is slightly different from the typical form of Cayenne, but I can only regard it as a subspecies, which may be called *Tachyphonus surinamus napensis.*

5. TACHYPHONUS NATTERERI. (Plate VI. fig. 1.)

Tanagra cristatella, Natt. MS.

Tachyphonus nattereri, Pelz. Orn. Bras. p. 214.

Niger; cristâ pilei medii exsurgente aurantiacâ; dorso postico fulvescente; alarum tectricibus superioribus minoribus et subalaribus necnon remigibus ad basin albis. Long. tota 5·4, alæ 2·7, caudæ 2·4. *Fem.* Rufescens; subtùs et in remigum marginibus dilutior.

Hab. Villa Maria, Mato Grosso (*Natt.*).

Obs. Sim. *T. delattrii,* sed alarum tectricibus albis et uropygio fulvescente diversus.

This is an excellent species, approaching *T. delattrii* in form, but easily distinguishable, as above mentioned. I am greatly indebted to Herr v. Pelzeln for sending me the typical specimens from Vienna for examination.

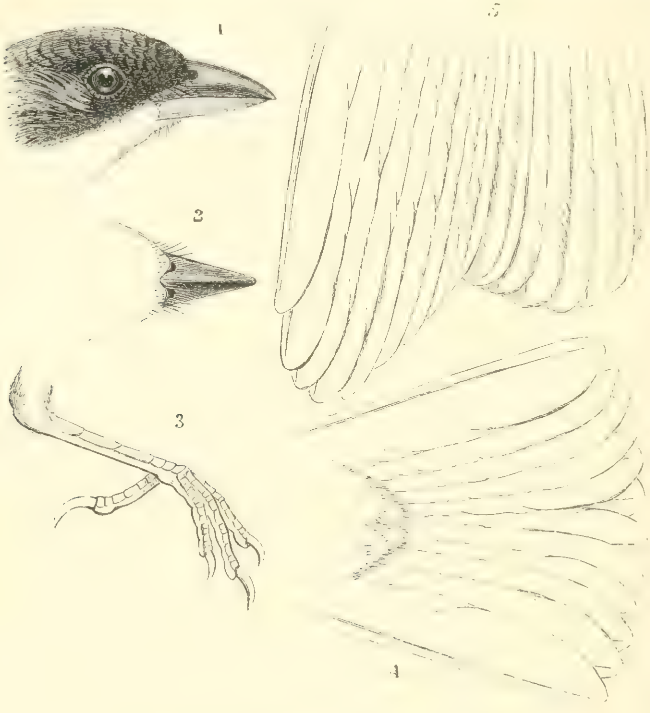
6. NESOSPINGUS SPECULIFERUS.

Chlorospingus speculiferus, Lawr. Ibis, 1875, p. 383, pl. ix. fig. 1; Gundl. J. f. O. 1878, p. 168, 1882, p. 161 (nest), et Añ. Soc. Esp. H. N. 1878, p. 190.

Above nearly uniform dark earthy brown; head rather darker, and with indications of longitudinal striations on the cap; a small white speculum on the fourth and fifth and sixth primaries; under surface white, slightly varied with grey; bill—upper mandible brown, lower white; feet brown. Whole length 6·5, wing 3·4, tail 2·5 inches.

Hab. Porto Rico.

This peculiar Antillean form can, I think, hardly be referred to *Chlorospingus*; it has a much stouter and thicker bill and large Fringilline feet. I am not sure that its correct position is not with the Ground-Finches (*Pipilo* &c.), but for the present I propose to leave it among the Tanagers under a separate generic name. I am much indebted to the authorities of the Smithsonian Institution for an opportunity of examining the typical specimen of this rare bird.



Structure of *Nesospingus speculiferus.*

7. Chlorospingus flavo-virens.

Buarremon flavo-virens, Lawrence, Ann. Lyc. N. Y. viii. p. 467.

This bird seems to me to be a species of *Chlorospingus*. Mr. Lawrence has kindly lent me his unique specimen. The skin is apparently of the ordinary "Quito" make.

C. flavo-virens is remarkable for its uniform olive plumage, which is strongly fringed with yellow below. Its beak is rather short and strong, so that it goes best among the typical *Chlorospingi*, next to *C. phæocephalus*. In coloration there is no species which much resembles it.

8. BUARREMON SORDIDUS.

Buarremon sordidus, Lawrence, Ann. Lyc. N. Y. x. p. 138 (1874).

The typical specimen of this species, which Mr. Lawrence has kindly lent to me, is, I am quite convinced, only *B. pallidinuchus* in immature plumage.

9. PYRGISOMA ALBICEPS.

Buarremon albiceps, Tacz. Orn. d. Pér. ii. p. 533.

This is, I think, after examining the typical specimen kindly lent to me by the Warsaw Museum, not a *Buarremon*, but a species of Ground-Finch of the genus *Pyrgisoma*, as shown by its large feet and short wings. I may add that after again examining specimens of the *Pipilo mystacalis* of Taczanowski (P. Z. S. 1874, p. 521), a bird which I subsequently described as *Buarremon nationi* (P. Z. S. 1881, p. 485), I have come to the conclusion that M. Taczanowski was more nearly right than I was as to the proper classification of this bird, and that it is, in fact, a Ground-Finch, and not a Tanager. But I should be inclined to place it rather in *Pyrgisoma*, near to *P. rubricatum* and its allies, instead of *Pipilo*.

XXVI.—*Notes on the Birds of Paisandú, Republic of Uruguay.*

By ERNEST GIBSON, F.Z.S. (Communicated by J. J. DALGLEISH*.)

THE district of Paisandú is very much broken by irregular hill and dale, the former of very little height, and of such a gradually sloping ascent as not to check a horse's gallop. In most of the valleys are streams or rivulets, as a rule of little importance. The soil is exceptionally fine, except where interrupted by the approach of the stony "tosca" formation to the surface. Along the river Uruguay exists a strip of wood, more or less broad, consisting of "sauce" (*Salix humboldtiana*?), "moya" (*Moya spinosa*?), "seybo" (*Erythrina crista-galli*), "tala" (*Celtis tala*), "coronillo" (*Scutia buxifolia*), and "quebrachillo" (*Quebrachia*, sp. ?), together with a great number of shrubs. These trees also extend for a certain distance up the valleys of the larger streams, tributaries of the Uruguay. On the higher land they are replaced by the stunted "algoroba" (*Prosopis juliflora*?), "espinillo" (*Acacia*, sp.), and—a very few—"ñandubay" (*Prosopis nandubey*), gradually thinning out as they retire from the vicinity of the great river. The grasses are a mixture of what is called "hard" and "soft," interspersed with a considerable variety of other plants. The wealth and beauty of the wild flowers in spring is something extraordinary; the ground is one blaze of colour, to an extent probably unknown in any other country; the three varieties of verbenas, scarlet, mauve, and white, greatly predominate. In the woods are also to be found very pretty ferns, creepers, cacti, and air-plants. At this season also the "espinillo" and "quebrachillo" trees are a mass of golden feathery bloom, and literally perfume the air. It is rather curious, though, in view of the foregoing, that I only counted about twenty-five species of butterflies, and was equally disappointed by the paucity in both numbers and species of other insects, barring mosquitos and tarantulas. Round the house in which I resided were several paddocks, containing a few espinillo-trees and several coverts of hard grass, the latter two or three feet high. In these and their accompanying hedges of ñapindá (*Acacia bona-*

---

* [These notes are the results of observations made by Mr. Gibson

---

during a short stay made by him in the above district during the months of October, November, and December 1883. They accompanied a small collection of skins and eggs, the former of which, so far as necessary, have been kindly identified by Mr. Sclater. The notes I give in Mr. Gibson's own words.—J. J. D.]

riensis) I found the majority of the following species of birds.

1. Turdus rufiventris, Vieill.

Only seen in one locality, the woods in the valley of the Cangüe river, a tributary of the Uruguay, about ten miles below Paisandú.

2. Mimus calandria (d'Orb. et Lafr.).

Very abundant.

3. Anthus correndera (Vieill.).

4. Progne chalybea (Gm.).

Very abundant, appearing first on 15th September, and breeding about the middle of November.

5. Progne tapera (Linn.).

Appeared on 29th September.

6. Petrochelidon pyrrhonota (Vieill.).

Found a nest in a wall of outbuildings 18th November, containing young and an addled egg.

7. Spermophila hypoxantha (Cab.).

One shot in pasture near head station 11th November.

8. Donacospiza albifrons (Vieill.).

Is probably abundant, but difficult to distinguish from other grass-covert frequenting species. A female was shot off the nest in grass-pasture near head station 28th October. It had no note. The nest was placed in the top of a thick clump of grass, and was built of dry grass and fine hair-like roots, and lined with the latter. Number of eggs three.

9. Poospiza nigrorufa (d'Orb. et Lafr.).

Appeared (♂) on 1st October.

10. Diuca minor, Bp.

Not uncommon. I generally observed it in pairs, frequenting the small scattered trees in the open, and each pair very local in its habits. The note is very sweet, and so exceedingly like that of *Paroaria cucullata,* that I was never able to distinguish them during the whole of my stay.

11. Zonotrichia pileata (Bodd.).

12. Embernagra platensis (Gm.).

Abundant and breeding. Unfortunately, the only nest I found, in a grass-covert, contained young, so the eggs of this species are still unknown to me.

13. Sycalis pelzelni, Scl.

14. Sycalis luteola (Sparrm.).

Abundant. Breeding generally.

15. Molothrus bonariensis (Gm.).

16. Molothrus badius (Vieill.).

17. Xanthosomus flavus (Gm.).

Abundant, frequenting the open camp and grass-coverts. I discovered a breeding-colony in the former, where a herd of cattle of over 2000 head used to be rounded up every alternate morning, and where a patch of thistles about 150 yards long by 30 yards broad had sprung up. Here some ten or twelve pairs had taken up their abode. They did not seem to be much put about by their proximity to the busy scene, unless when some thick-skinned and perverse bull made a dash through the belt of five-feet high thistles. I, of course, in view of such an attraction—the birds, not the bull—was very zealous in detecting incipient stampedes on that side, and continually sneaking round the thistle-bed. The nests were situated sometimes in the centre of the place, sometimes at the edge, fairly well concealed by the leaves, and about two feet from the ground. They were built of dry grass and lined with a fine quality of the same and a few horsehairs. Four was the general number of eggs, five being the maximum and three the minimum, and most of the nests contained eggs by the end of November. The birds were very tame and the females sat close. This species has bred, too, in a district I know well in the neighbourhood of Cape San Antonio, Province of Buenos Ayres, to which its range extends in the months of December and January with considerable annual regularity.

18. Pseudoleistes virescens (Vieill.).

Breeding in end of November. A typical nest was placed in the thickest and highest part of the clump of thistles above mentioned, about two feet from the ground. It was built of dry grass, then a thick layer of mud, still moist, and was sparsely lined with some fine grass or rootlets. It contained five eggs.

19. Leistes superciliaris, Bp.

This species was abundant during all the time of my stay, frequenting the open camp and grass-coverts. Latterly I had strong suspicions of its breeding, but did not succeed in getting a nest. The note is harsh and unmusical.

20. Tænioptera dominicana (Vieill.).

A not uncommon bird, and very conspicuous from its plumage, generally to be seen in pairs; but I found no nests.

21. Alectorurus guiru-yetapa (Vieill.).

I was much struck by the appearance and habits of this species and the contrast between the male and female. The bare part of the throat in the former is of a reddish colour, not pleasing to the eye. It was not uncommon, frequenting localities where a few trees were associated with high grass, thistles, and isolated plants of a similar height, preferring to alight on the latter. The flight is singularly weak and feeble, not necessarily low, but like the fluttering passage of a butterfly through the air. The tail is not expanded, but floats along behind in a semi-detached way. One nest which I succeeded in obtaining was placed on the ground among some weeds; it was neatly built of grass, lined with the same and a few feathers, and contained three eggs. The date was 21st October.

22. Machetornis rixosa (Vieill.).

Not uncommon.

23. Habrura pectoralis (Vieill.).

Not rare.

24. Pitangus bellicosus (Vieill.).

25. Pyrocephalus rubineus (Bodd.).
Appeared on 10th September and became very abundant.

26. Tyrannus melancholicus, Vieill.
Not uncommon and paired, probably breeding about 28th October, when a male was shot in the garden.

27. Milvulus tyrannus (Linn.).
Very abundant. Appeared first on 20th September, and was breeding generally by the end of November. One nest which I took contained four eggs: the first occasion on which I ever saw the usual number of three exceeded. It was placed in a stunted "espinillo" tree, about six feet from the ground, and was built of dry stems of plants and lined with fine roots, some wool, and some horsehair. The date was 30th November.

28. Geositta cunicularia (Vieill.).

29. Furnarius rufus (Gm.).
Abundant.

30. Leptasthenura ægithaloides (Kittl.).

31. Synallaxis phryganophila, Vieill.
One shot 7th October in "ñapindá" hedge near head station. This was the only specimen I saw, though I frequently looked for it afterwards. These hedges were such horrid things that one had to look for the birds to appear at the surface some distance off or else push the muzzle of the gun in among the branches and blow the specimen to pieces; and the birds generally showed a marked preference for the latter course. On this occasion I was strolling along with the setting sun in my eyes, when a small bird showed on the outside at a fair range. It might have been a Wren or any thing common, for all I could judge; but, arguing from the general perversity of "ñapindá" hedges and their denizens, I selected to satisfy myself, and fired. Hence this exultation and dissertation.

32. Synallaxis sordida, Less.

Another single specimen was procured of this bird on 28th October, regarding which I can offer no further information.

33. Anumbius acuticaudatus, Less.

Very abundant. Every stunted little tree had one or more nests, new or old.

34. Phacellodomus ruber (Vieill.).

A rather common species, but very difficult to get hold of, as it either keeps in the centre of the hedges when approached or in grass-coverts, hides itself and refuses to be put up. On the whole it makes little use of its wings. Perched on one spot it gives utterance to a single harsh monotonous note, which it keeps reiterating for hours at a time, and which can be heard at a considerable distance. A dull brown bird with a dull brown voice would fully describe it! It also feeds on small beetles, another fact I find chronicled, as if desperately hard up for points of interest in its life-history. However, its nest is worthy of description. It is usually placed at the extremity of a branch in some small tree or hedgerow, occasionally over a stream at about six feet from the ground, and without any attempt at concealment; it is built of small twigs, after the manner of *Anumbius acuticaudatus*, that is, with a passage leading into a chamber, but in this case horizontally. The nesting-chamber is lined with woven hairs, fine roots, and feathers. The eggs number four, and the breeding-season seems to be the end of October and November, nests having been taken from 21st October to 1st December.

35. Thamnophilus argentinus, Cab.

I only observed one of this species during my stay, and this I shot in a hedge near head station on 28th October.

36. Chlorostilbon aureiventris (d'Orb. et Lafr.).

I was disappointed on finding this to be the only species of Humming-bird to be met with in this district. One or two old nests which I saw were attached to the thatch-eaves of a deserted house.

37. Podager nacunda (Vieill.).

A clutch of two eggs obtained 14th October. There was no nest. The female, which I shot, sat close and only flew a few yards. The food in the crop was principally beetles.

38. Chrysoptilus cristatus (Vieill.).

39. Bolborhynchus monachus (Bodd.).

Only once seen, when a flock of three or four passed overhead in the direction of the river.

40. Guira piririgua (Vieill.).

Abundant.

41. Pholeoptynx cunicularia (Mol.).

Abundant.

42. Milvago chimango (Vieill.).

Abundant.

43. Polyborus tharus (Mol.).

Abundant.

44. Ardea egretta (Gm.).

One or two seen about the river.

45. Ciconia maguari (Gm.).

One or two observed.

46. Columba maculosa, Temm.

47. Zenaida maculata (Vieill.).

48. Columbula picui (Temm.).

Only one solitary specimen seen.

49. Vanellus cayennensis (Gm.).

Common.

50. Gallinago paraguaiæ (Vieill.).

I shot one of a pair at a small swamp on 1st October. It has a cry which at once attracts one's notice.

51. Nothura maculosa (Temm.).

Very abundant. On 21st October I saw one nest with ten eggs. Others seen the same day contained seven, six, and five eggs. They were generally situated in comparatively open ground, but occasionally in the centre of a thick tuft of grass.

52. Rhea americana, Lath.

Not uncommon in a semidomesticated sort of way. One nest which I saw contained about fifty eggs in two tiers; they looked like round china bowls. It is decidedly awkward to approach a nest unless one's horse is a hundred years old, and consequently accustomed to everything; otherwise, when the Ostrich suddenly rises and dashes at the intruder, its outspread and drooping wings sweeping the ground, and its beak rattling like a pair of castanets, the horse is sure to bolt or buck, sometimes both.

Besides the foregoing, I certainly saw upwards of thirty species which I am unable to name. Of course, had I had more time at my disposal, and been oftener in the woods or about the river, the number of species would have been much greater.

XXVII.—*Notes on the Birds of the Genus* Homorus *observed in the Argentine Republic.* By W. H. Hudson, C.M.Z.S.

1. Homorus lophotes, Reichb.[*]

This species interested me greatly, but, owing to its rarity in the district where I observed it and to its recluse habits, my knowledge of it is very scanty. In the province of Buenos Ayres its presence is confined to the narrow strip of subtropical wood fringing the low shores of the river Plata, and this shows that the bird comes to us from the north. Possibly its true home is somewhere in the South-Brazilian subregion.

---

[*] [This species is usually called *Homorus unirufus* (d'Orb. et Lafr.), and is the bird so designated in our 'Nomenclator,' p. 65: it is also termed *Anabates unirufus* by Burmeister ('La Plata-Reise,' ii. p. 466). It is, however, as Graf v. Berlepsch has pointed out to me, not the *Anumbius* (sive *Anabates*) *unirufus* of d'Orbigny's 'Voyage' (Aves, p. 259, pl. 55. fig. 1), which is much more like *Homorus cristatus* (Spix); but it may probably be "*Anabates cristatus*, Spix," of d'Orbigny's 'Voyage' (p. 258), although Spix's bird is certainly quite different. Under these circumstances the first specific name applicable to this species appears to be "*lophotes*" of Reichenbach (Handb. p. 182, tab. dxxv. fig. 3628). Whether it is really the *Anabates lophotes* of the Leyden Museum (quoted in Bp. Consp. i. p. 210) does not much matter, as that is only a MS. name.—P. L. S.]

When surprised its white eye, blue dagger-like beak, and raised crest give it a strikingly bold angry appearance, the effect of which is heightened by the harsh rasping scream it utters when disturbed. This resentful look is deceptive, however, for the bird is the shyest creature imaginable. Its language has the shrill excited character common to this most loquacious family; and at intervals throughout the day two birds, male and female, meet together and make the woods echo with their screaming concert. For many weeks after I had become familiar with these loud-sounding notes, while collecting in the littoral forest where it is found, the bird was still to me only a "wandering voice;" but I did not give up the pursuit till I had seen it several times and had also secured two or three specimens. I found one nest, though without eggs, a rough-looking domed structure, made with material enough to fill a barrow. I also discovered that the bird feeds exclusively on the ground, close to the boles of low-branching trees, where there is usually an accumulation of fallen bark, dead leaves, and other rubbish. Here the bird digs with its sharp beak for the small insects it preys on. When approached it does not fly away, but runs swiftly to the nearest tree, behind the trunk of which it hides, then scuttles on to the next tree, and so escapes without showing itself.

2. Homorus gutturalis (d'Orb. et Lafr.).

I found this bird quite common on the dry open plains in the neighbourhood of the Patagonian Rio Negro. It avoids close thickets. Like the northern *Homorus*, it is shy, and being paler-plumaged and without the bright beak and eye-tints, has not the bold striking appearance of that bird; still I do not think any ornithologist can meet with it and fail to be strongly impressed with its personality, if such a word can be applied to a bird. Dendrocolaptine birds are, as a rule, builders of big nests and very noisy; *H. gutturalis* is, I believe, the loudest screamer and greatest builder of the family. Male and female live together in the same locality all the year; the young, when able to fly, remain with their parents till the breeding-season, so that the birds are found occasionally in pairs, but more frequently in families of five or six individuals. When feeding they scatter themselves about, each bird attaching itself to a large bush, scraping and prodding for insects about the roots; and at intervals one of the old birds, ascending a bush, summons the others with loud shrill cries, on which they all hurry to the place of meeting, and from the summits of the bushes burst forth in a piercing chorus, which sounds at a distance like screams of hysterical laughter. At one place, where I spent some months, there were some bushes over a mile and a quarter from the house I lived in, where these birds used to hold frequent meetings, and in that still atmosphere I could distinctly hear their extravagant cries at that distance. After each performance they pursue each other, passing from bush to bush with a wild jerky flight, and uttering harsh angry notes.

They select a low, strong, wide-spreading bush to build in; the nest, which is made of stout sticks, is perfectly spherical and four to five feet deep, the chamber inside being very large. The opening is at the side near the top, and is approached by a narrow arched gallery, neatly made of slender sticks resting along a horizontal branch, and about fourteen inches long. This peculiar entrance, no doubt, prevents the intrusion of snakes and small mammals. So strongly made is the nest that I have stood on the dome of one and stamped on it with my foot without injuring it in the least, and to demolish one I had to force my gun-barrel into it, then prize it up by portions. I examined about a dozen of these enormous structures, but they were all found before or after the laying-season, so that I did not see the eggs.

I wish to notice here the apparent relationship to *Homorus* of a species belonging to a different genus, I mean *Synallaxis patagonica* (D'Orb. Voy. p. 249; see also P. Z. S. 1872, p. 544). Its nearest allies appear to be *S. sordida* and *S.*

modesta, and I do not doubt that its affinities are with these and other members of the somewhat complicated group it is classed with; but in its habits it is a little *Homorus,* and unlike a *Synallaxis.* Being a little feeble bird, it does not live at the roots of trees and large bushes, but is found under diminutive scrubby plants in open arid situations. About the roots of these wiry little bushes, 12 to 18 inches high, the bird searches for small insects, and when disturbed has a feeble jerky flight, which carries it to a distance of ten or twenty yards. It is, however, very difficult to make it rise; for when approached it runs swiftly away, leaving one in doubt as to whether he has seen a mouse or a bird darting across the naked spaces between the shrubs. Probably it has acquired these habits in the desolate situations it frequents: anyhow, I am so convinced of the variable character of habits in general, that I am very far from imagining that the resemblance of this species to *Homorus* points to community of descent; on the contrary, I believe that it is entirely accidental.

XXVIII.—*On the Coloration in Life of the naked Skin-tracts on the Head of* Geococcyx californicus. By Dr. R. W. Shufeldt, U.S. Army, Memb. of the Am. Ornith. Union, &c.

(Plate VII.)

The latest authoritative work that has appeared upon North-American Ornithology, the second edition of Professor Elliott Coues's 'Key to North-American Birds,' presents us, it seems to me, with a very inadequate description of the extent of the naked skin-tracts about the eye and on the head of *Geococcyx,* or even their coloration in life. This author simply tells us that there is "a naked area around the eye," and that this "bare space around the eye [is] bluish and orange." So far as I am aware, no other ornithological work gives us any better description than the 'Key.' Now the true condition of the tracts in question is so far different from this that I feel justified in making an accurate drawing of the head of a fine specimen of the Ground-Cuckoo, presumably a male, which was presented me in the flesh a few days ago. This drawing I here present to my ornithological friends who may not have been so fortunate as to have had the opportunity of examining *Geococcyx* as I had, and observing the interesting state of affairs which I will now describe.

The hindmost feathers which go towards the formation of the crest of this Cuckoo are of a deep prussian blue colour, quite black in some lights, being untipped by bright ochre, as the anterior ones are. Just behind the crest proper occur the ochre-and-white-tipped feathers that are the continuation of the feather-tracts that pass over the eye. Below these, again, we find a *median* tract of feathers, a little more than a centimetre long and only five millimetres wide, extending down towards the nuchal region. On either side of this latter tract, overlying the *parietal* region of the skull, we discover a naked-skin area, about three fourths the size of a shilling, and of a deep, though very bright, orange-colour. These orange-coloured spaces are really on the back of the head, being simply separated from each other by the aforesaid narrow median line of feathers. When the bird becomes excited and elevates its crest and the feathers behind the head, then upon lateral view this orange space will show as I have depicted it in my drawing. Its rounded posterior outline is the same as the outline of the smooth posterior surface of the skull, as already stated, it being its sole covering in this region. In life the eye of *Geococcyx* is entirely surrounded by a naked area of skin, which both above and anteriorly is coloured a deep prussian-blue tint. Beneath the eye this gradually passes into a pale bluish white, almost quite white in some lights. The naked space behind the eye is the most extensive of all. Posteriorly this merges into the orange of the parietal skin-tract described above, while anteriorly it blends with the other colour just mentioned. It is divided into three fairly distinct horizontal bands of colour, the upper and lower being dark prussian blue, the middle one a bluish white of a similar shade to that described as tinting the skin beneath the eye.

These colours, especially the brilliant orange, must be quite striking in the living bird; and it is easy for us to imagine that they may "change colour" with the mood of their possessor, blushing much in the same manner as the head of the Turkey cock is wont to do under certain circumstances.

Fort Wingate, New Mexico,
April 13th, 1885.

XXIX.—*Descriptions of three new Species of Birds from South America.* By Hans von Berlepsch.

1. Chlorospingus reyi, sp. nov.

Ch. superciliari (Lafr.) proximus, sed superciliis albis nullis et pileo toto usque ad nucham cinereo, colore dorsi olivaceo lætiore et colore subtus intensius flavo primo visu distinguendus. Long. al. 67½, rostr. culm. 11½, tars. 21½ mm.

Habitat. Mérida, Venezuela (typ. in Mus. H. v. B.).

To Dr. E. Rey, of Leipzig, who has furnished me with a large and interesting collection of bird-skins received by him direct from a collector residing at Mérida, Venezuela, this new species is dedicated. Unfortunately, the single specimen of *Ch. reyi* contained in that collection is not in good condition, and the tail is wanting. Nevertheless, there can be not the slightest doubt that it belongs to a *Chlorospingus* which is new to science. Its nearest ally may be *Ch. superciliaris* (Lafr.); but at first sight it differs from that species in altogether wanting the white superciliary stripe and the white feathers under the eye, always to be seen in true *Ch. superciliaris*: In the latter species the cinereous colour is confined to the front, while in *Ch. reyi* it covers the whole of the pileus, coming down as far as the nape. The lores are also grey. On the upper edge of the eye there commences a broad olivaceous stripe which borders the cinereous cap and further involves the upper edge of the auriculars, then joins with the olive-green of the back. All the rest of the sides of the head and all the underparts of the body are yellow, but of a deeper shade than in *Ch. superciliaris*. The sides of the body and the under tail-coverts are more tinged with olive-green than in *Ch. superciliaris*; the upper parts of the body are of a purer and clearer olive-green than in the last-named species.

2. OCHTHŒCA CONSOBRINA, sp. nov.

O. corpore supra obscure olivaceo, pileo ardesiaco induto; corpore subtus sulphureo, gula pectoreque olivaceo lavatis seu flammulatis; alis caudaque nigro-brunneis, rectricibus olivaceo limbatis, remigum primariorum 3, 4, 5, 6 pogonio toto, sequentium dimidio apicali, olivaceo-fulvo limbatis, ultimis extus latius sordido albo marginatis; tectricum mediarum et maximarum maculis apicalibus (duas vittas formantibus) late fulvis. Long. al. 63, caud. 62, rostr. 9¼, tars. 17½ mm.

Habitat. Bogota in Nov. Granada (typ. in Mus. H. v. B.).

In general coloration this new species reminds one of some species of the genera *Tyranniscus* and *Leptopogon*, but in form it agrees closely with several species of the genus *Ochthœca*, or more properly with those of the subgenus *Mecocerculus*. The bill is very slender and compressed, even a little more so than in *O. setophagoides*. The nostrils are of precisely the same form as in the last-named species. The bristles on the bill are very short and feeble. In colour *O. consobrina* is quite unlike any other species. The back is of a very dark olive-green, the top of the head presenting a slight suffusion of a dark ashy or blackish colour. The chin, lores, and feathers round the eye, as well as an inconspicuous or ill-defined superciliary stripe, appear dull whitish. The ear-coverts are yellowish olive-green, bordered with blackish on their tips. The whole under surface of the body is of an intense sulphur-yellow, suffused or flammulated with olive-green on the throat and breast. Wing and tail-feathers blackish brown, the latter margined with olive-green. The primaries, from the third to the sixth, are margined with rusty yellowish from the base to a short distance from the tip, while in the secondaries these margins do not begin until the middle of the feather and extend to the tip itself. The tertiaries show broader margins of soiled white. The medium-sized and the longest of the upper wing-coverts are marked on their tips with large fulvous-yellow spots, presenting two well-marked bands on the wing-coverts. Bill and feet dark brown, the mandible paler at the base below.

The typical specimen was received with a lot of Bogota skins forwarded by Mr. Edward Gerrard, jun., of London, and shows the peculiar make of all skins prepared by the Indians of that country.

3. ATTILA GRISEIGULARIS, sp. nov.

A. cinereo simillimus, sed differt gula tota cum jugulo albo et griseo variegatis, pectore pallidius rufo, abdomine toto citrino-fulvo; capite supra clarius cinereo et hoc colore magis in dorsum producto; dorso, uropygio caudaque pallidius rufo-brunneis; tectricibus caudæ superioribus pallide fulvis. Long. al. 17, caud. 74, rostr. 37½, tars. 25½ mm.

Habitat. Sta. Catharina, Brazil (?) (typ. in Mus. H. v. B.).

My specimen, which I got from Mr. F. F. G. Umlauff, of Hamburg, is labelled as coming from Sta. Catharina. A skin of *Dendrocincla turdina* (Licht.), of similar preparation, is also said to be from Sta. Catharina; therefore I have little doubt that the habitat assigned is correct.

Of *A. cinereus* (Gmel.) I have several skins from Bahia and one from Southern Brazil (Rio or S. Paulo?), all of which have only the upper part of the throat (or chin) whitish, variegated with dark grey; while in the new species the whole throat and jugulum to the breast are of this coloration, in which the white more predominates. There are other points of difference, which are expressed in the diagnosis.

XXX.—*A List of the Birds obtained by Mr. Henry Whitely in British Guiana.* By OSBERT SALVIN, M.A., F.R.S., &c.

[Continued from page 219.]

(Plate VIII.)

147. OXYRHAMPHUS HYPOGLAUCUS.

Oxyrhamphus hypoglaucus, Salv. & Godm. Ibis, 1883, p. 206.

Merumé Mountains, Roraima (3500 ft.).

148. OCHTHŒCA SETOPHAGOIDES.

Tyrannula setophagoides, Bp. Act. Scienz. Ital. Med. p. 405.

Ochthœca setophagoides, Cab. & Hein. Mus. Hein. ii. p. 48.

Mecocerculus leucophrys, Scl. Cat. Am. B. p. 199 (nec d'Orb. & Lafr.).

Roraima (5000–6000 ft.).

These specimens agree with others from the highlands of Venezuela and the Andes of Colombia.

149. FLUVICOLA PICA.

Muscicapa pica, Bodd. Tabl. Pl. Enl. p. 42.

Fluvicola bicolor, Sw. Cab. in Schomb. Guiana, iii. p. 703.

A common species in British Guiana, but not represented in Mr. Whitely's collections.

150. ARUNDINICOLA LEUCOCEPHALA.

Pipra leucocephala, Linn. Syst. Nat. i. p. 340.

Arundinicola leucocephala, Cab. in Schomb. Guiana, iii. p. 703.

Bartica Grove.

151. COPURUS LEUCONOTUS.

Copurus leuconotus, Lafr. Rev. Zool. 1842, p. 335; Scl. Cat. Am. B. p. 204.

Copurus pœcilonotus, Cab. in Schomb. Guiana, iii. p. 702.

Not represented in Mr. Whitely's collections. The Guianan *Copurus* is united to that of Colombia and Ecuador by Mr. Sclater in his 'Catalogue of American' Birds and elsewhere.

152. Platyrhynchus mystaceus.

Platyrhynchus mystaceus, Vieill. N. Dict. d'Hist. N. xxvii. p. 14; Scl. Cat. Am. B. p. 207.

Roraima (3500–6000 ft.).

These birds agree with Brazilian examples which I believe to be *P. mystaceus,* Vieill. A male specimen has the mandible dark-coloured and thus differs from females, which have a pale yellow mandible. The difference is probably due to the immaturity of the former.

153. Platyrhynchus saturatus.

Platyrhynchus saturatus, Salv. & Godm. Ibis, 1882, p. 78.

Camacusa, Merumé Mountains.

154. Platyrhynchus superciliaris.

Platyrhynchus superciliaris, Lawr. Ibis, 1863, p. 184.

Bartica Grove.

Besides Mr. Whitely's examples we have two others from Albina in Surinam, obtained in 1866 by Mr. Clarence Bartlett. These are, in my opinion, undistinguishable from Panama specimens of *P. superciliaris,* Lawr. The most nearly allied species is *P. coronatus,* Scl., of Eastern Ecuador, a somewhat larger darker bird with less clearly defined yellow colour beneath.

155. Todirostrum cinereum.

Todus cinereus, Linn. Syst. Nat. i. p. 178.

Todirostrum cinereum, Scl. Cat. Am. B. p. 207.

Triccus cinereus, Cab. in Schomb. Guiana, iii. p. 702.

Bartica Grove, Merumé Mountains, Roraima (3500 ft.).

156. Todirostrum maculatum.

Todus maculatus, Desmarest, Tod. pl. 70.

Todirostrum maculatum, Scl. & Salv. Ibis, 1881, p. 267.

Bartica Grove.

This is the true *T. maculatum,* as distinguished from the bird of the Amazons valley, the *T. signatum* of Sclater and Salvin, Ibis, 1881, p. 267.

157. Euscarthmus russatus.

Euscarthmus russatus, Salv. & Godm. Ibis, 1884, p. 445.

Roraima (5000–6000 ft.).

158. COLOPTERUS GALEATUS.

Motacilla galeata, Bodd. Tabl. Pl. Enl. p. 24.

Colopterus galeatus, Scl. Cat. Am. B. p. 210.

Colopterus cristatus, Cab. in Schomb. Guiana, iii. p. 702 (ex Gmel.).

Bartica Grove, Camacusa.

A young specimen from Bartica Grove (7th June) has no crest, the vertex being of nearly the same colour as the back.

159. HAPALOCERCUS PECTORALIS.

Sylvia pectoralis, Vieill. N. Dict. d'Hist. N. xi. p. 210.

Serphophaga pectoralis, Cab. & Hein. Mus. Hein. ii. p. 53.

Hapalocercus pectoralis, Pelz. Orn. Bras. p. 103.

Roraima (3500 ft.).

160. MIONECTES OLEAGINEUS.

Muscicapa oleaginea, Licht. Verz. Doubl. p. 55.

Mionectes oleagineus, Cab. in Schomb. Guiana, iii. p. 702.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500–6000 ft.).

These specimens agree with others from Bahia, the true *M. oleagineus* (Licht.).

161. LEPTOPOGON AMAUROCEPHALUS.

Leptopogon amaurocephalus, Cab. Arch. f. Naturg. p. 251.

Merumé Mountains, Roraima (3500 ft.).

Mr. Whitely's specimens agree fairly with South-Brazilian skins.

162. LEPTOPOGON NIGRIFRONS.

Leptopogon nigrifrons, Salv. & Godm. Ibis, 1884, p. 446.

Roraima (5000 ft.).

163. PHYLLOMYIAS SEMIFUSCA.

Phyllomyias semifusca, Scl. P. Z. S. 1861, p. 383.

Bartica Grove.

These examples agree with specimens from Northern Colombia, whence the type of this species was obtained.

164. ORNITHION INERME.

Ornithion inerme, Hartl. J. f. Orn. 1853, p. 35; Scl. P. Z. S. 1873, p. 577.

Bartica Grove.

165. Ornithion pusillum.

Myiopatis pusilla, Cab. & Heine, Mus. Hein. ii. p. 58.

Ornithion pusillum, Scl. P. Z. S. 1873, p. 577.

Bartica Grove.

166. Tyrannulus elatus.

Sylvia elata, Lath. Ind. Orn. ii. p. 549.

Tyrannulus elatus, Cab. in Schomb. Guiana, iii. p. 702.

Bartica Grove.

167. Tyranniscus griseiceps.

Tyranniscus griseiceps, Scl. & Salv. P. Z. S. 1870, p. 841.

Bartica Grove, Roraima (3500 ft.).

168. Tyranniscus gracilipes.

Tyranniscus gracilipes, Scl. & Salv. P. Z. S. 1867, p. 981; 1870, p. 843.

Roraima (3500–5000 ft.).

169. Tyranniscus acer.

Tyranniscus acer, Salv. & Godm. Ibis, 1883, p. 206.

Bartica Grove, Camacusa, Roraima (3500 ft.).

170. Elainea pagana.

Muscicapa pagana, Licht. Verz. Doubl. p. 54.

Elaenea pagana, Cab. in Schomb. Guiana, iii. p. 701.

Elainea pagana, Scl. Cat. Am. B. p. 216; P. Z. S. 1870, p. 834.

Bartica Grove, Roraima (3500 ft.).

171. Elainea albiceps.

Muscipeta albiceps, d'Orb. & Lafr. Syn. Av. p. 47.

Elainea albiceps, Scl. P. Z. S. 1870, p. 834.

Merumé Mountains, Roraima (3500 ft.).

172. Elainea olivina.

Elainea olivina, Salv. & Godm. Ibis, 1884, p. 446.

Camacusa, Roraima (5000–6000 ft.).

173. Elainea ruficeps.

Elainea ruficeps, Pelz. Orn. Bras. pp. 108, 179.

Merumé Mountains.

Several specimens of this distinct species, which was discovered by Natterer at Borba on the Rio Madeira.

174. ELAINEA ELEGANS.

Elainea elegans, Pelz. Orn. Bras. pp. 107, 179; Scl. P. Z. S. 1870, p. 835.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

175. ELAINEA BREVIROSTRIS.

Elainea brevirostris, Tsch. Fauna Per. p. 159; Cab. in Schomb. Guiana, iii. p. 701; Tacz. Orn. Pér. ii. p. 272.

According to Dr. Cabanis specimens of this species obtained by Schomburgk near the coast agree with others from Peru. We have not been able to recognize the bird in Mr. Whitely's collection.

176. LEGATUS ALBICOLLIS.

Tyrannus albicollis, Vieill. N. Dict. d'Hist. N. xxxv. p. 89.

Elaenea albicollis, Cab. in Schomb. Guiana, iii. p. 701.

Legatus albicollis, Scl. Cat. Am. B. p. 218.

Bartica Grove, Camacusa.

177. MYIOZETETES CAYENNENSIS.

Muscicapa cayanensis, Linn. Syst. Nat. i. p. 327.

Elaenea cayanensis, Cab. in Schomb. Guiana, iii. p. 701.

Myiozetetes cayennensis, Scl. P. Z. S. 1871, p. 752.

Bartica Grove, Roraima (3500 ft.).

178. MYIOZETETES SULPHUREUS.

Muscicapa sulphurea, Spix, Av. Bras. ii. p. 16, pl. 20.

Myiozetetes sulphureus, Scl. P. Z. S. 1871, p. 734; 1880, p. 28.

Tyrannus luggeri, Ridgw. Pr. U.S. Nat. Mus. i. p. 166.

Bartica Grove.

179. RHYNCHOCYCLUS SULPHURESCENS.

Platyrhynchus sulphurescens, Spix, Av. Bras. ii. p. 10, pl. 12. f. 1.

Rhynchocyclus sulphurescens, Scl. Cat. Am. B. p. 220.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

180. RHYNCHOCYCLUS FLAVIVENTRIS.

Platyrhynchus flaviventris, Spix, Av. Bras. ii. p. 12, pl. 15. f. 1.

Cyclorhynchus flaviventris, Cab. in Schomb. Guiana, iii. p. 700.

Rhynchocyclus flaviventris, Scl. Cat. Am. B. p. 221.

Not represented in Mr. Whitely's collection.

181. RHYNCHOCYCLUS RUFICAUDA.

Platyrhynchus ruficauda, Spix, Av. Bras. ii. p. 9, pl. ii. f. 2.

Rhynchocyclus ruficauda, Scl. Cat. Am. B. p. 221.

Elaenea spadicea, Cab. in Schomb. Guiana, iii. p. 702.

Bartica Grove, Camacusa, Merumé Mountains.

182. PITANGUS LICTOR.

Lanius lictor, Licht. Verz. Doubl. p. 49.

Saurophagus lictor, Cab. in Schomb. Guiana, iii. p. 698.

Pitangus lictor, Scl. Cat. Am. B. p. 221.

Bartica Grove.

183. PITANGUS PARVUS.

Pitangus parvus, Pelz. Orn. Bras. pp. 111, 181.

Camacusa, Merumé Mountains.

Several specimens. Natterer's types of this little-known bird were obtained at Marabitanas.

184. PITANGUS SULPHURATUS.

Lanius sulphuratus, Linn. Syst. Nat. i. p. 137.

Saurophagus sulphuratus, Cab. in Schomb. Guiana, iii. p. 698.

Pitangus sulphuratus, Scl. Cat. Am. B. p. 222.

Bartica Grove.

185. MYIODYNASTES AUDAX.

Muscicapa audax, Gm. Syst. Nat. i. p. 934.

Scaphorhynchus audax, Cab. in Schomb. Guiana, iii. p. 699.

Myiodynastes audax, Scl. Cat. Am. B. p. 223.

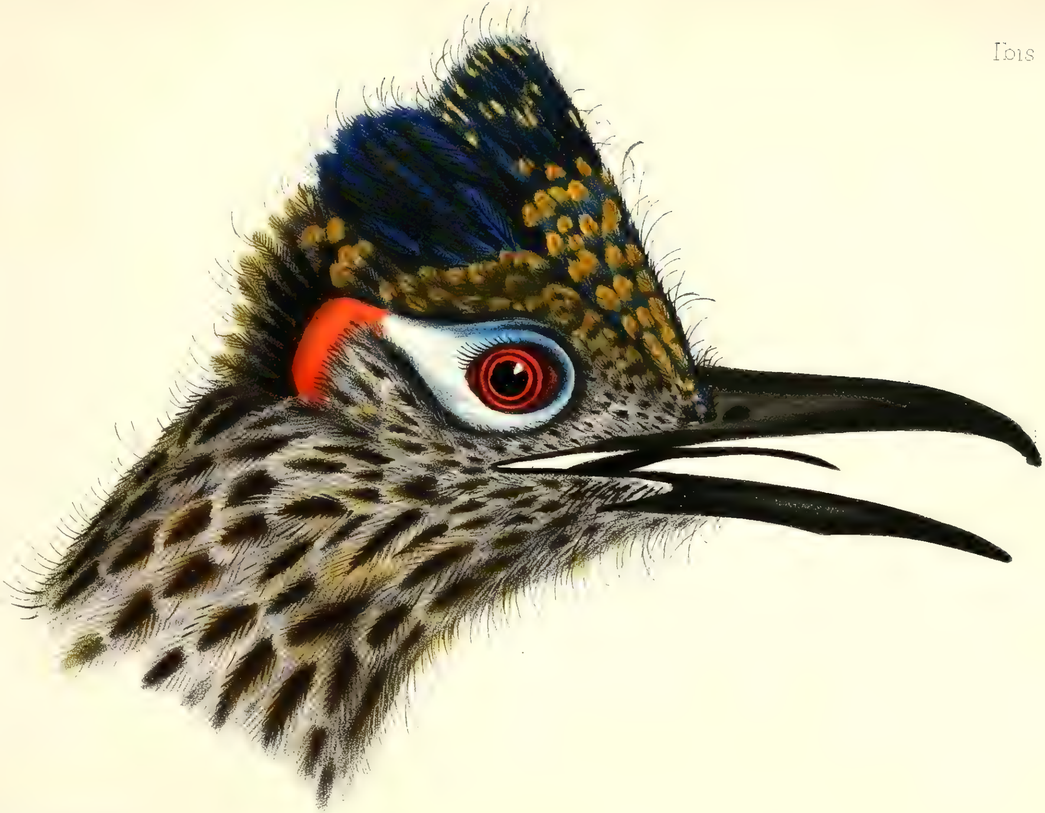
Bartica Grove.

186. MEGARHYNCHUS PITANGUA.

Lanius pitangua, Linn. Syst. Nat. i. p. 136.

Megarhynchus pitangua, Scl. Cat. Am. B. p. 224.

Roraima (3500 ft.).



Dr R W Shufeldt U S A del et Pinx
T. Smith lith.

Hanhart imp

GEOCOCCYX CALIFORNIANUS ♂

187. MUSCIVORA REGIA.

Todus regius, Gm. Syst. Nat. i. p. 445.

Muscivora regia, Scl. Cat. Am. B. p. 224.

Camacusa.

188. HIRUNDINEA FERRUGINEA.

Todus ferrugineus, Gm. Syst. Nat. i. p. 446.

Hirundinea ferruginea, Scl. Ibis, 1869, p. 196, pl. 5. f. 2.

Roraima (5000 ft.).

189. MYIOBIUS BARBATUS.

Muscicapa barbata, Gm. Syst. Nat. i. p. 933.

Myiobius barbatus, Cab. in Schomb. Guiana, iii. p. 701; Scl. Cat. Am. B. p. 225.

Bartica Grove, Merumé Mountains, Camacusa, Roraima (3500 ft.), Atapurau River.

190. MYIOBIUS RORAIMÆ.

Myiobius roraimæ, Salv. & Godm. Ibis, 1883, p. 207.

Roraima (3500 ft.).

191. MYIOBIUS ERYTHRURUS.

Myiobius erythrurus, Cab. Arch. f. Naturg. p. 249, t. 5. f. 1; Schomb. Guiana, iii. p. 701.

Bartica Grove, Camacusa.

192. MYIOBIUS NÆVIUS.

Muscicapa nævia, Bodd. Tabl. Pl. Enl. p. 34.

Myiobius nævius, Scl. Cat. Am. B. p. 227.

Roraima (3500 ft.).

193. PYROCEPHALUS RUBINEUS.

Muscicapa rubinus, Bodd. Tabl. Pl. Enl. p. 42.

Pyrocephalus rubineus, Scl. Cat. Am. B. p. 227.

Myiarchus coronatus, Cab. in Schomb. Guiana, iii. p. 700.

Not represented in Mr. Whitely's collection.

194. EMPIDOCHANES OLIVUS.

Muscicapa oliva, Bodd. Tabl. Pl. Enl. p. 34.

Empidochanes olivus, Scl. Cat. Am. B. p. 228.

Bartica Grove.

195. EMPIDOCHANES PŒCILURUS?

Empidochanes pœcilurus, Scl. P. Z. S. 1862, p. 112.

Roraima (5000 ft.).

We have skins attributed to this species from Peru and Northern Colombia. Both have nearly the whole of the inner web of the outer rectrices fulvous. Two of Mr. Whitely's specimens have also this character, but to a less extent. Two others have these rectrices nearly uniform fuscous. The latter are marked male, the former female; so the question arises whether the colour of the rectrices is a sexual character! Our other specimens do not help us in this matter, the sex not being recorded, and on the whole we prefer to leave the question of the specific position of these Guiana birds in abeyance for the present.

196. CONTOPUS ARDESIACUS.

Tyrannula ardesiaca, Lafr. Rev. Zool. 1844, p. 80.

Myiochanes ardesiacus, Scl. Cat. Am. B. p. 232.

Roraima (5000–6000 ft.).

197. MYIARCHUS TYRANNULUS.

Muscicapa tyrannulus, P. L. S. Müll. Syst. Nat. Suppl. p. 169.

Myiarchus tyrannulus, Coues, Pr. Ac. Phil. 1872, p. 71.

Myiarchus ferox (Gm.), Cab. in Schomb. Guiana, iii. p. 700.

Bartica Grove, Camacusa.

198. MYIARCHUS PHÆONOTUS.

Myiarchus phæonotus, Salv. & Godm. Ibis, 1883, p. 207.

Roraima (3500 ft.).

199. MYIARCHUS NIGRICEPS.

Myiarchus nigriceps, Scl. P. Z. S. 1860, p. 68; Cat. Am. B. p. 234.

Camacusa, Merumé Mountains, Roraima (3500 ft.).

200. EMPIDONOMUS VARIUS.

Muscicapa varia, Vieill. N. Dict. d'Hist. N. xxi. p. 458.

Empidonomus varius, Scl. Cat. Am. B. p. 234.

Tyrannus rufinus (Spix), Cab. in Schomb. Guiana, iii. p. 700.

Bartica Grove, Roraima (3500 ft.).

201. TYRANNUS MELANCHOLICUS.

Tyrannus melancholicus, Vieill. N. Dict. d'Hist. N. xxxv. p. 84; Cab. in Schomb. Guiana, iii. p. 700; Scl. Cat. Am. B. p. 235.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

202. MILVULUS TYRANNUS.

Milvulus tyrannus (Linn.), Cab. in Schomb. Guiana, iii. p. 699.

Milvulus violentus (Vieill.), Scl. Cat. Am. B. p. 237.

Bartica Grove, Roraima (3500 ft.).

203. PIPRITES CHLORION.

Hemipipo chlorion, Cab. Arch. f. Naturg. 1847, p. 234; in Schomb. Guiana, iii. p. 697.

Piprites chlorion, Salv. & Godm. Ibis, 1882, p. 78.

Bartica Grove, Merumé Mountains, Roraima (3500 ft.).

204. CHLOROPIPO UNIFORMIS.

Chloropipo uniformis, Salv. & Godm. Ibis, 1884, p. 447.

Merumé Mountains, Roraima (3500–6500 ft.).

205. XENOPIPO ATRONITENS.

Xenopipo atronitens, Cab. Arch. f. Naturg. 1847, p. 235; in Schomb. Guiana, iii. p. 697.

Merumé Mountains, Roraima.

206. PIPRA AUREOLA.

Pipra aureola, Linn. Cab. in Schomb. Guiana, iii. p. 696; Scl. Cat. Am. B. p. 248.

Bartica Grove.

A female specimen apparently of this species.

207. PIPRA CORNUTA.

Pipra cornuta, Spix, Av. Bras. ii. p. 5, pl. 7. f. 2; Cab. in Schomb. Guiana, iii. p. 696; Scl. Cat. Am. B. p. 248.

Roraima (3500–3700 ft.).

A common species in this region.

208. Pipra iracunda.

Pipra iracunda, Salv. & Godm. Ibis, 1884, p. 447.

Roraima (3500 ft.).

209. Pipra auricapilla.

Pipra aurocapilla, Licht. Verz. Doubl. p. 29; Cab. in Schomb. Guiana, iii. p. 696; Scl. Cat. Am. B. p. 249.

Bartica Grove, Camacusa, Merumé Mountains, Atapurau River, Roraima (3500 ft.).

210. Pipra leucocilla.

Pipra leucocilla, Linn., Cab. in Schomb. Guiana, iii. p. 697; Scl. Cat. Am. B. p. 249.

Bartica Grove, Camacusa, Merumé Mountains.

211. Pipra virescens.

Pipra virescens, Pelz. Orn. Bras. pp. 128, 187; Salv. & Godm. Ibis, 1883, p. 208.

Tyranneutes brachyurus, Scl. & Salv. Ibis, 1881, p. 269.

Camacusa.

Natterer's types of this species were obtained at Marabitanas and other places on the Rio Negro.

212. Pipra suavissima.

Pipra serena, Cab. in Schomb. Guiana, iii. p. 697 (nec Linn.).

Pipra suavissima, Salv. & Godm. Ibis, 1882, p. 79, pl. 1.

Bartica Grove, Merumé Mountains, Atapurau River, Roraima (3500–4000 ft.).

213. Pipra gutturalis.

Pipra gutturalis, Linn. Syst. Nat. i. p. 340; Scl. Cat. Am. B. p. 250.

Bartica Grove, Camacusa, Merumé Mountains, Roraima.

214. Chiroxiphia pareola.

Chiroxiphia pareola (Linn.), Cab. in Schomb. Guiana, iii. p. 695; Scl. Cat. Am. B. p. 251.

Not observed by Mr. Whitely.

215. Chiroxiphia caudata.

Pipra caudata, Shaw, Nat. Misc. v. pl. 153.

Chiroxiphia longicauda (Vieill.), Cab. in Schomb. Guiana, p. 695.

Included in Schomburgk's list, but probably erroneously, as the species seems to be unknown except in the forest-region of South Brazil.

216. NEOPIPO CINNAMOMEA.

Pipra? cinnamomea, Lawr. Pr. Ac. Phil. 1868, p. 429.

Neopipo cinnamomea, Scl. & Salv. P. Z. S. 1873, p. 283.

Neopipo rubicunda, Scl. & Salv. P. Z. S. 1869, p. 438, pl. 30. f. 3.

Camacusa.

217. CHIROMACHÆRIS MANACUS.

Pipra manacus, Linn. Syst. Nat. i. p. 340.

Chiromachæris manacus, Cab. in Schomb. Guiana, iii. p. 696; Scl. Cat. Am. B. p. 252.

Bartica Grove, Camacusa.

218. HETEROPELMA AMAZONUM?

Heteropelma amazonum, Scl. P. Z. S. 1860, p. 466.

Bartica Grove, Camacusa, Roraima.

These specimens seem to belong to *H. amazonum*, but they vary to some extent among themselves, and the genus being in some confusion their determination is somewhat uncertain.

219. HETEROPELMA IGNICEPS.

Heteropelma igniceps, Scl. P. Z. S. 1871, p. 750.

Elaenea aurifrons, Cab. in Schomb. Guiana, iii. p. 701 (nec Neuw.).

Camacusa, Roraima.

220. TITYRA CAYANA.

Lanius cayanus, Linn. Syst. Nat. i. p. 137.

Tityra cayana, Cab. in Schomb. Guiana, iii. p. 697; Scl. Cat. Am. B. p. 238.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

221. HADROSTOMUS MINOR.

Querula minor, Less. Traité d'Orn. i. p. 363.

Hadrostomus minor, Cab. & Heine, Mus. Hein. ii. p. 85; Scl. Cat. Am. B. p. 240.

Bartica Grove, Camacusa.

222. PACHYRHAMPHUS GRISEIGULARIS. (Plate VIII.)

Pachyrhamphus griseigularis, Salv. & Godm. Ibis, 1883, p. 208; 1884, p. 448.

♂. Supra olivaceus, capite summo nigro, genis olivaceis, loris albis; alis et cauda nigris, secundariis internis et tectricibus illarum omnibus sordide olivaceo marginatis; subtus gula et pectore griseis albo striatis, ventre medio et crisso albis; rostro plumbeo-nigro, tomiis albidis; pedibus plumbeis: long. tota 5·4, alæ 3, caudæ 2·2, rostri a rictu 0·9, tarsi 0·8.

♀. Supra olivacea, capite summo paulo obscuriore; alis fusco-nigris, secundariis internis olivaceo marginatis, tectricibus omnibus læte cinnamomeis; subtus grisea albo striata, ventre medio et crisso albis, hypochondriis viridi lavatis; rostri maxilla corylina, mandibula albida; pedibus pallidis: long. tota 5·6, alæ 3, caudæ 2·3, rostri a rictu 0·8, tarsi 0·8.

Hab. Roraima, Guiana Brit. ad alt. 3500 pedum (*H. Whitely*).

Obs. Affinis *P. viridi*, sed differt cervice postica olivacea, pectore griseo nec flavo, et tectricibus alarum et secundariis internis nigris nec olivaceis.

223. PACHYRHAMPHUS NIGER.

Pachyrhamphus niger, Spix, Av. Bras. ii. p. 32, pl. 45. f. 1; Scl. Cat. Am. B. p. 241.

Bathmidurus niger, Cab. in Schomb. Guiana, iii. p. 698.

Roraima (3500–4000 ft.).

224. PACHYRHAMPHUS ATRICAPILLUS.

Lanius atricapillus, Gm. Syst. Nat. i. p. 302.

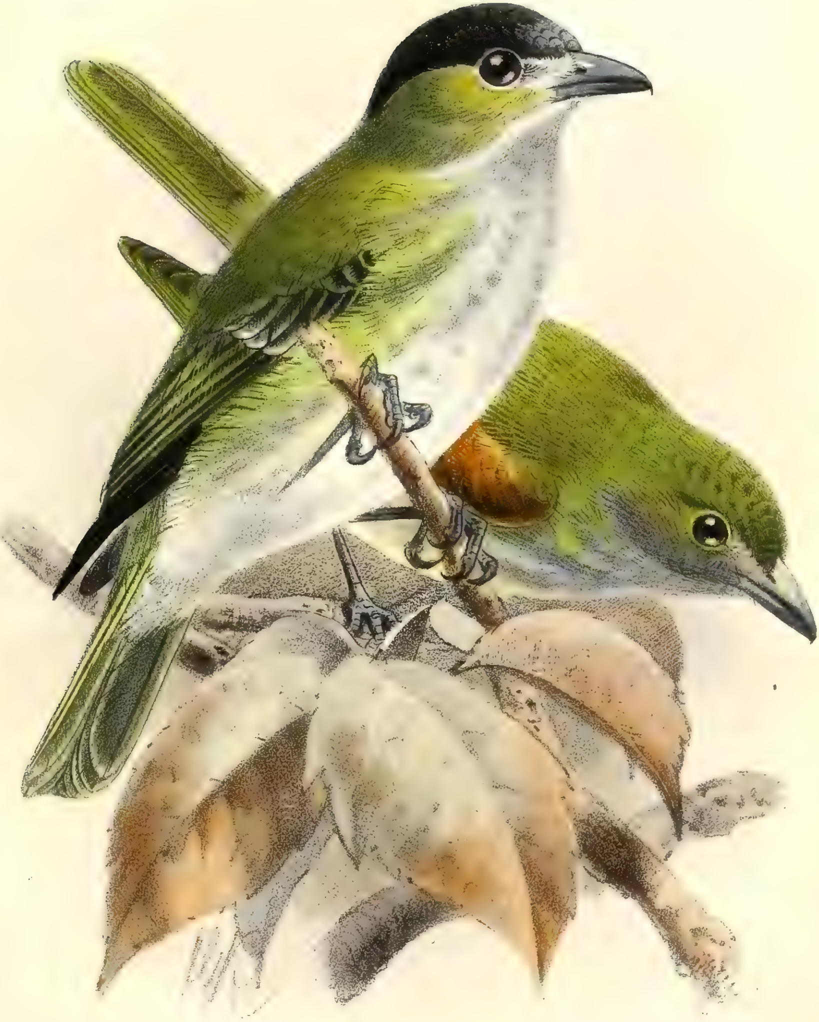
Pachyrhamphus atricapillus, Cab. in Schomb. Guiana, iii. p. 698; Scl. Cat. Am. B. p. 242.

Bartica Grove, Merumé Mountains, Camacusa.

225. LATHRIA CINEREA.

Ampelis cinerea, Vieill. N. Dict. d'Hist. N. viii. p. 162.

Ibis 1885 Pl VIII



J.G. Keulemans lith. Hanhart imp.

PACHYRHAMPHUS GRISEIGULARIS, ♂ *et* ♀.

Lathria cinerea, Salv. Cat. Strickl. Coll. p. 325.

Lipaugus cineraceus, Cab. in Schomb. Guiana, iii. p. 693; Scl. Cat. Am. B. p. 243.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

226. LATHRIA STREPTOPHORA.

Lathria streptophora, Salv. & Godm. Ibis, 1884, p. 448, pl. 14.

Roraima (5000 feet).

227. AULIA HYPOPYRRHA.

Ampelis hypopyrrha, Vieill. N. Dict. d'Hist. N. viii. p. 164.

Aulia hypopyrrha, Salv. Cat. Strickl. Coll. p. 325.

Bartica Grove, Camacusa.

This is probably the true *A. hypopyrrha* of Vieillot, which was based upon the Guianan bird. Both sexes have a few chestnut feathers tipped with black upon the abdomen; these are apparently absent from the Brazilian bird, which, if distinct, should bear the name *Aulia sibilatrix* (Wied). According to Mr. Whitely's dissections the yellow spot on each flank, as distinguished from the chestnut one, is not a sexual peculiarity.

228. LIPAUGUS SIMPLEX.

Muscicapa simplex, Licht. Verz. Doubl. p. 53.

Lipaugus simplex, Cab. in Schomb. Guiana, iii. p. 694; Scl. & Salv. Ex. Orn. p. 6.

Bartica Grove, Camacusa, Merumé Mountains.

229. ATTILA BRASILIENSIS.

Attila brasiliensis, Less. Traité d'Orn. p. 360; Scl. Cat. Am. B. p. 195.

Bartica Grove, Camacusa.

Several specimens agreeing so closely with Brazilian examples of *A. brasiliensis* that I am reluctant to attempt their separation. They seem rather darker and greener in general coloration, characters of but slight importance in this genus.

230. ATTILA SPODIOSTETHUS.

Attila spodiostethus, Salv. & Godm. Ibis, 1883, p. 209.

Bartica Grove.

231. ATTILA UROPYGIALIS.

Dasycephala uropygialis, Cab. in Schomb. Guiana, iii. p. 686.

Bartica Grove.

A single specimen agreeing with the description of this species. Its nearest ally appears to be *A. spadaceus,* but it is altogether lighter in the colour of its plumage.

232. ATTILA THAMNOPHILOIDES.

Muscicapa thamnophiloides, Spix, Av. Bras. ii. p. 19, pl. 26. f. 1.

Dasycephala thamnophiloides, Cab. in Schomb. Guiana, iii. p. 686.

Attila thamnophiloides, Scl. Cat. Am. B. p. 195.

Not represented in Mr. Whitely's collection.

233. RUPICOLA CROCEA.

Pipra rupicola, Linn. Syst. Nat. i. p. 338.

Rupicola crocea, Cab. in Schomb. Guiana, iii. p. 694; Scl. Cat. Am. B. p. 253.

Camacusa, Merumé Mountains, Atapurau River.

234. PHŒNICOCERCUS CARNIFEX.

Ampelis carnifex, Linn. Syst. Nat. i. p. 298.

Phœnicocercus carnifex, Cab. in Schomb. Guiana, iii. p. 695; Scl. Cat. Am. B. p. 253.

Bartica Grove, Camacusa.

235. PIPREOLA WHITELYI.

Pipreola whitelyi, Salv. & Godm. Ibis, 1884, p. 449.

Roraima (6000 ft.).

236. COTINGA CÆRULEA.

Ampelis cærulea, Vieill. N. Dict. d'Hist. N. viii. p. 161; Cab. in Schomb. Guiana, iii. p. 693.

Cotinga cærulea, Scl. Cat. Am. B. p. 256.

Ampelis cotinga, Cab. in Schomb. Guiana, iii. p. 693.

Bartica Grove, Atapurau River.

237. Cotinga cayana.

Ampelis cayana, Linn. Syst. Nat. i. p. 268; Cab. in Schomb. Guiana, iii. p. 693.

Cotinga cayana, Scl. Cat. Am. B. p. 256.

Bartica Grove.

238. Xipholena pompadora.

Ampelis pampadora, Linn. Syst. Nat. i. p. 298.

Xipholena pompadora, Cab. in Schomb. Guiana, iii. p. 693; Scl. Cat. Am. B. p. 329.

Bartica Grove, Camacusa, Merumé Mountains, Atapurau River.

239. Iodopleura leucopygia, sp. n.

Iodopleura pipra, Cab. in Schomb. Guiana, iii. p. 697.

I. pipræ ex Brasiliâ affinissima, sed uropygio albo distinguenda, capite summo quoque dorso fere concolori.

Hab. Guiana Brit.

Mus. nostr.

Mr. Whitely's collections do not contain examples of this bird, but we have long had in our possession two skins received from Mr. Whitely, sen., with the locality "British Guiana" attached to them. These skins are of the usual make of that country, and differ from *I. pipra* of Brazil in the above-mentioned small but very definite character.

240. Iodopleura fusca.

Ampelis fusca, Vieill. N. Dict. d'Hist. N. viii. p. 162.

Iodopleura fusca, Salv. Cat. Strickl. Coll. p. 330.

Pipra laplacii, Gerv. Mag. Zool. 1836, cl. ii. pl. 68.

Bartica Grove.

241. Querula cruenta.

Muscicapa cruenta, Bodd. Tabl. Pl. Enl. p. 23.

Querula cruenta, Scl. Cat. Am. B. p. 257.

Bartica Grove.

242. Hæmatoderus militaris.

Coracias militaris, Lath. Ind. Orn. Suppl. p. xxvii.

Threnœdus militaris, Cab. in Schomb. Guiana, iii. p. 690.

Hæmatoderus militaris, Scl. Cat. Am. B. p. 257.

Not represented in Mr. Whitely's collection.

243. CHASMORHYNCHUS NIVEUS.

Ampelis nivea, Bodd. Tabl. Pl. Enl. p. 49.

Chasmorhynchus niveus, Scl. Cat. Am. B. p. 258.

Chasmorhynchus carunculatus (Gm.), Cab. in Schomb. Guiana, iii. p. 692.

Bartica Grove, Merumé Mountains, Atapurau River, Roraima (3500 ft.).

244. CHASMORHYNCHUS VARIEGATUS.

Ampelis variegatus, Gm. Syst. Nat. i. p. 841.

Chasmorhynchus variegatus, Salv. Cat. Strickl. Coll. p. 331.

Roraima (3500 ft.).

245. GYMNOCEPHALUS CALVUS.

Corvus calvus, Gm. Syst. Nat. i. p. 372.

Gymnocephalus calvus, Cab. in Schomb. Guiana, iii. p. 690; Scl. Cat. Am. B. p. 258.

Bartica Grove, Camacusa, Roraima (3500 ft.).

246. GYMNODERUS FŒTIDUS.

Gracula fœtida, Linn. Syst. Nat. i. p. 164.

Gymnoderus fœtidus, Cab. in Schomb. Guiana, iii. p. 691; Scl. Cat. Am. B. p. 258.

Not in Mr. Whitely's collection.

247. PYRODERUS SCUTATUS?

Coracias scutatus, Shaw, Mus. Lev. p. 199.

Pyroderus scutatus, Scl. Cat. Am. B. p. 259.

Threnœdus rubricollis (Vieill.), Cab. in Schomb. Guiana, iii. p. 690.

Schomburgk's specimens were named by Prof. Cabanis *T. rubricollis*, a synonym of *P. scutatus*, but the bird should probably be referred to the allied *P. orenocensis*. There being no skins in Mr. Whitely's collection I am unable to decide the question.

248. CEPHALOPTERUS ORNATUS.

Cephalopterus ornatus, Geoffr. Ann. Mus. xiii. pl. 15; Cab. in Schomb. Guiana, iii. p. 691; Scl. Cat. Am. B. p. 259.

Not in Mr. Whitely's collection.

[To be continued.]

XXXI.—*Review of the Species of the Family* Coliidæ.

By Captain G. E. Shelley, F.Z.S.

The Coliidæ form a very distinct family, not closely allied to any other, but may, I think, with advantage be retained next to the Musophagidæ until some more suitable position be definitely fixed for them. Their anatomy is principally known to me by the following papers:—Murie, Ibis, 1872, pp. 262–280; Garrod, P. Z. S. 1876, pp. 416–419; Forbes, Ibis, 1881, p. 24. This family, which is confined to Africa, consists of eight species, including four or five more or less well-marked races. They are all referable to the one genus *Colius*, Briss. Orn. iii. 1760, p. 204, type *C. capensis*. The minor divisions proposed by Bonaparte—*Rhabdocolius* for *C. striatus* and its allies, and *Urocolius* for *C. erythromelon*—present no definite characters.

The Colies are all fruit-eaters, live in small bands, frequent thick bushes, and, when disturbed, fly straight to some neighbouring covert. Owing to their peculiar structure, they place themselves in the most extraordinary attitudes when they rest or scramble amongst the boughs, and they roost at night in tightly packed companies for warmth, generally, if not always, with their feet above their heads. Their nests are cup-shaped and placed in thickish bushes at a few feet from the ground, and some if not all, of the species, frequently add green leaves to the interior of their nests during incubation. The eggs are rough, rather obtuse ovals, and generally white.

In life the dark portions of the bill are blue-grey, but become black in the dried skins, and the legs, which are red in life, fade to buff. The bare skin round the eye and the pale portions of the bill in *C. macrourus* and *C. erythromelon* are bright red in living specimens, while in all the other species, I believe, the bare skin is slaty black and the pale portion of the bill buff or buffish horn-colour.

There are now examples of three species of this genus living in the Zoological Society's Gardens. They are admirably adapted for cage-birds, being active, bold, and apparently hardy, and the quaintness of their attitudes is interesting to watch.

Key to the Species.

a. A sharply defined basal half of the upper mandible red, and the bare skin round the eyes of the same colour (fading in dried skins into buff); remainder of the bill black, with the exception, occasionally, of the basal portion of the lower mandible. Tail-feathers distinctly narrower. Upper parts more or less shaded with green. No trace of bars on any portion of the plumage.
- *a^1*. Nape pale blue, strongly contrasting with the crest and mantle...................... 1. *C. macrourus.*
- *b^1*. Nape uniform with the crest and mantle .... 2. *C. erythromelon.*

b. No portion of the lower mandible black. Upper mandible black, generally with a pale portion, but never with a sharply defined pale basal half. Tail-feathers distinctly broader. With no green shade on any portion of the plumage.
- *b^1*. With some bright chestnut on the rump.
  - *b^2*. Middle and lower back black, with a broad white band down the centre .... 3. *C. capensis.*
  - *c^2*. Middle and lower back bright chestnut.... 4. *C. castanonotus.*
- *c^1*. Entire back dull brown, nearly uniform with the wings and tail. Throat with distinct bars.
  - *c^2*. Cheeks and ear-coverts brown like the crown.
    - *c^3*. Forehead jet-black. A larger amount of black on the throat. Upper mandible with a pale patch .... 5. *C. nigricollis.*
    - *d^3*. Forehead never jet-black. A less amount of black on the throat. Upper mandible blackish with no pale patch .... 6. *C. striatus.*
  - *d^2*. Cheeks and ear-coverts white or nearly so. With a pale patch on the upper mandible.
    - *d^3*. Crown brown .... 7. *C. leucotis.*
    - *e^3*. Crown white........................ 8. *C. leucocephalus.*

1. COLIUS MACROURUS.

Lanius macrourus, Linn. S. N. i. 1766, p. 134.

Colius senegalensis, Gm. S. N. i. 1788, p. 842; Hartl. Orn. W.-Afr. 1857, p. 155; Fischer, Zeitschr. ges. Orn. (Madaraz), 1844, p. 363 (Pangani).

Colius macrourus, Gray & Mitchell, Gen. B. ii. 1849,

p. 393, pl. 96 (good); Heugl. Orn. N.O.-Afr. 1869–71, pp. 712, cliv; Finsch, Tr. Z. S. vii. 1869, p. 275; Blanf. Geol. & Zool. Abyss. 1870, p. 318; Antin. & Salvad. Ann. Mus. Civ. Genova, 1873, p. 416 (Bogos); Bocage, Orn. Angola, 1877, p. 130 (Angola, Hartl. ?); Rochebrune, Faun. Sénégamb. 1884, p. 127.

Hab. N.E., E., and W. Africa. Between about 15° N. lat. and 5° S. lat. Bogos, Abyssinia, Kordofan, White Nile, Masai-land to Pangani, Gaboon, Sierra Leone, Casamanse, Senegambia.

A small immature specimen in the British Museum, labelled "Lebka R., 2500 ft. (*Blanford*)," has no blue on the nape, and the entire bill is pale.

2. Colius erythromelon.

? *Loxia cinerea*, Sparrm. Mus. Carls. 1786–88, pl. 88 (not recognizable).

Colius indicus, Lath. Ind. Orn. i. 1790, p. 370 (incorrect locality).

Colius coromandelicus, Licht. sen., Hamb. Nat. Verz. 1793, p. 42 (incorrect locality).

Le Coliou Guiriva, Levaill. Ois. d'Afr. vi. 1808, p. 42, pl. 258 (good).

Colius erythromelon, Vieill. Nouv. Dict. vii. 1817, p. 378; Gurney, in Anderss. B. Dam. Ld. 1872, p. 203; Sharpe, ed. Layard's B. S. Afr. 1884, pp. 551, 853; Sclater, P. Z. S. 1884, p. 473, pl. 45. figs. 2, 3 (good).

Colius senegalensis, Less. (nec Gm.), Traité d'Orn. 1831, p. 453.

Colius quiriva, Rüpp. Mus. Senk. iii. 1845, p. 43; Kirk, Ibis, 1864, p. 329 (Zambesi).

Colius erythromelas, Cab. Mus. Hein. iii. 1860, p. 97; Finsch & Hartl. Vög. Ostafr. 1870, p. 469; Bocage, Orn. Angola, 1877, p. 128 (Benguela).

Colius macrurus, Strickl. & Sclat. Contr. Orn. 1852, p. 151.

Colius capensis, Layard (nec Gm.), B. S. Afr. 1867, p. 222.

Hab. S. Africa, Zambesi, Matabele, Transvaal, Cape Colony, Damara, Benguela.

3. COLIUS CAPENSIS.

Loxia colius, Linn. S. N. i. 1766, p. 301.

Colius capensis, Gm. S. N. i. 1788, p. 842; Gurney, Ibis, 1868, p. 47 (Natal); id. in Anderss. B. Dam. Ld. 1872, p. 202; Sharpe, ed. Layard's B. S. Afr. 1884, pp. 552, 853.

Colius erythropus, Gm. S. N. i. 1788, p. 842; Ayres, Ibis, 1871, p. 259 (Transvaal).

Colius leuconotus, Lath. Ind. Orn. i. 1790, p. 369.

Le Coliou à dos blanc, Levaill. Ois. d'Afr. vi. 1808, p. 39, pl. 257 (good).

Colius erythropygius, Vieill. Nouv. Dict. vii. 1817, p. 377.

Hab. S. Africa, Transvaal, Natal, Cape Colony, Damara.

I have rejected the oldest title *colius* on account of its having been previously employed by Brisson for the genus.

There are two specimens of this species now living in the Zoological Society's Gardens.

4. COLIUS CASTANONOTUS.

Colius castanotus, E. & J. Verr. Rev. et Mag. Zool. 1855, p. 351 (Gaboon); Hartl. Orn. W.-Afr. 1857, p. 155; Monteiro, Ibis, 1862, p. 333 (Angola); Sclater, P. Z. S. 1876, p. 413, pl. 35 (good); Bocage, Orn. Angola, 1877, p. 129 (Benguela); Sharpe, ed. Layard's B. S. Afr. 1884, p. 554.

Hab. S. and W. Africa, Benguela, Angola, Gaboon.

In the otherwise good illustration of this bird in the P. Z. S. the upper mandible should not be so uniformly coloured, but should have a large pale blotch extending over the basal half of the culmen.

5. COLIUS NIGRICOLLIS.

Le Coliou rayé à gorge noire, Levaill. Ois. d'Afr. vi. 1808, p. 45, pl. 259 (good).

Colius nigricollis, Vieill. Nouv. Dict. vii. 1817, p. 378; Hartl. Orn. W.-Afr. 1857, p. 155 (Angola); Sharpe, P. Z. S. 1873, p. 717 (Congo); Bocage, Orn. Angola, 1877, p. 129; Reichenow, J. f. O. 1877, p. 15 (Loango Coast); Scl. P. Z. S. 1884, p. 530, pl. 45. fig. 1 (good); Rochebrune, Faun. Sénégamb. 1884, p. 128 (Casamanse, Gambia).

Hab. Central and W. Africa. Ndoruma in Central Africa, about 5° N. lat. and 25° E. long. On the West Coast, Angola, Congo, Loango Coast, Casamanse, and Gambia.

There is a fine specimen in the British Museum labelled "Ndoruma (*F. Bohndorff*)." There is also a living specimen in the Zoological Society's Gardens.

6. COLIUS STRIATUS.

Tanagra macroura, Scop. (nec Linn.) Del. Flor. et Faun. Insubr. ii. 1786, p. 95.

Colius striatus, Gm. S. N. i. 1788, p. 369; Sharpe, ed. Layard's B. S. Afr. 1884, pp. 558, 853.

Colius panayensis, Gm. S. N. i. 1788, p. 843.

Le Coliou rayé, Levaill. Ois. d'Afr. vi. 1808, p. 36, pl. 256 (fair, Cape Colony).

Colius minor, Cab. J. f. O. 1876, p. 94 (Natal).

Hab. S. Africa, Shiré R., Swaziland, Transvaal, Natal, Cape Colony.

The present species includes three subspecies.

a. With a more or less distinctly marked chestnut forehead.
1. *C. striatus intermedius*, Shelley. Cape Colony.
b. Forehead perfectly uniform with the crown.
b^1. Larger ....2. *C. striatus typicus*, Gm. Eastern S. Africa.
c^1. Smaller ....3. *C. striatus minor*, Cab. Shiré R. and Natal.

In the British Museum there is a small specimen from the Shiré R. possibly immature; this I believe to belong to the *C. minor*, Cab., of which I have not been able to examine the type. An immature specimen from the Knysna in the British Museum has the entire upper mandible pale and the lower mandible nearly black.

I have proposed the title *C. intermedius* for the Cape Colony subspecies as it is intermediate between typical *C. striatus* and *C. nigricollis*.

7. COLIUS LEUCOTIS.

Colius leucotis, Rüpp. Mus. Senk. iii. 1845, p. 42, pl. 2. fig. 1 (good); Heugl. Orn. N.O.-Afr. 1869–71, pp. 710, cliv; Finsch, Trans. Z. S. vii. 1869, p. 276; Blanf. Geol. & Zool. Abyss. 1870, p. 316; Finsch & Hartl. Vög. Ostafr. 1870, p. 472; Antin. & Salvad. Ann. Mus. Civ. Gen. 1873, p. 416

(Bogos); Sharpe, P. Z. S. 1873, p. 714 (Mombas); Nicholson, P. Z. S. 1878, p. 358 (Dar-es-Salaam); Cab. J. f. O. 1878, p. 237 (Kikamba); Fischer & Reichen. J. f. O. 1878, p. 252 (Takaungu); Salvad. Ann. Mus. Civ. Gen. 1884, p. 100 (Shoa).

? *Colius capensis*, DesMurs (nec Gm.) in Lefebvre's Voy. Abys. 1845, p. 123; Heugl. Orn. N.O.-Afr. 1869–71, pp. 714, cliv (ex DesMurs).

Colius striatus, Sclat. P. Z. S. 1864, pp. 107, 112 (Usaramo); Heugl. Orn. N.O.-Afr. 1869–71, pp. 711, cliv. (part N.E. Afr. ex Sclat.); Finsch & Hartl. Vög. Ostafr. 1870, p. 471 (part E. Afr. ex Sclat.).

Hab. N.E. and E. Africa. Between 15° N. lat. and 8° S. lat. Bogos, Abyssinia, Shoa, White Nile, Masai-land, Zanzibar Province to Dar-es-Salaam.

Colius leucotis, which is the north-eastern representative of *C. striatus*, presents, like that species, two if not three subspecific phases, which may enable the practised eye to recognize the districts from which they come.

a. Larger: wing 3·8 to 4. Tail-feathers generally slightly broader. Neck and back generally more distinctly barred.
1. *C. leucotis typicus.* N.E. Africa, extending southward to Kitui in Ukamba.

b. Smaller: wing 3·35 to 3·75. Tail-feathers generally slightly narrower. Neck and back generally less distinctly barred.
2. *C. leucotis affinis.* E. Africa; Upper White Nile to Dar-es-Salaam.

The small race *b* shows the strongest variation in two specimens from Dar-es-Salaam; in these the back is entirely without signs of bars, the upper parts are slightly more rufous, and the white on the throat and sides of the head clearer and more strongly contrasted with the surrounding brown of the plumage.

These subspecies appear to run into each other.

8. COLIUS LEUCOCEPHALUS.

Colius leucocephalus, Reichen. Orn. Centralbl. 1879, p. 114 (Kikomba); Reichen. & Schalow, J. f. O. 1879, p. 313; Fischer, Zeitschr. ges. Orn. (Madaraz), 1884, p. 362.

Hab. E. Africa, Kikomba in Masai-land.

		N.E. Africa.			E. Africa.							S. Africa.									W. Africa.							
		Bogos.	Abyssinia.	Upper White Nile.	Ndoruma.	Masai-land.	Kitui.	Mombas.	Pangani.	Zanzibar.	Dar-es-Salaam.	Shiré R.	Zambesi.	Matabele.	Swaziland.	Transvaal.	Natal.	Cape Colony	Damara.	Benguela.	Angola.	Congo.	Loango.	Gaboon.	Sierra Leone.	Bissao.	Casamanse.	Senegambia.
1.	C. macrourus	*	*	*		*			*															*	*	*	*	
2.	C. erythromelon												*	*		*		*	*	*								
3.	C. capensis															*	*	*	*									
4.	C. castanonotus																			*	*			*				
5.	C. nigricollis				*																*	*	*				*	*
6.	C. striatus intermedius																	*										
	C. striatus typicus														*	*	*											
	C. striatus minor											*					*											
7.	C. leucotis typicus	*	*	*			*																					
	C. leucotis affinis			*		*		*	*	*	*																	
8.	C. leucocephalus					*																						

This species is, I believe, only known by the single type specimen, which I have not been able to examine. Its measurements agree well with the small race of *C. leucotis*, which I have proposed to distinguish as *C. l. affinis*. Should its characters prove to be due only to a partial albinism, the name *C. leucocephalus*, Reichen., will take the place by priority of my *C. l. affinis*.

XXXII.—*Notices of recent Ornithological Publications.*

[Continued from p. 234.]

85. *Cory's 'Birds of San Domingo'* (completion).

[The Birds of Haiti and San Domingo. By Charles B. Cory, F.L.S. Part IV. (completing the work). Boston: Estes and Lauriat.]

We congratulate Mr. Cory on the successful accomplishment of his meritorious work. It is a most useful volume, and deserves great commendation. Mr. Cory has not only much increased our knowledge of the peculiar avifauna of San Domingo, but has likewise brought together a *résumé* of previous authorities on the subject, and made his work a complete monograph. We can only regret that he has not given us a little longer essay by way of introduction. Thirty-two species are stated to be peculiar to the San-Domingan avifauna. The following six genera are, we believe, so far as is known, restricted to this island:—*Microligea, Dulus, Phœnicophilus, Calyptophilus, Loximitris*, and *Temnotrogon*. But there is a second *Dulus* (*D. nuchalis*) known to science, of which the exact habitat has not yet been ascertained.

Mr. Cory has finished San Domingo. But there are many other islands in the Antilles that require similar treatment (ornithologically), and will well reward the researches of Mr. Cory and his collectors.

86. *Dresser's Monograph of the Bee-eaters.*

[A Monograph of the Meropidæ, or Family of the Bee-eaters. By H. E. Dresser, F.L.S. Part IV. Small folio. London: 1884.]

In his fourth part Mr. Dresser figures the following species of *Melittophagus*:—

Melittophagus sonninii.
—— pusillus.
—— quinticolor.
—— leschenaulti.
Melittophagus gularis.
—— muelleri.
—— bullockoides.

87. *Dubois on the Genus* Otocorys.

[Remarques sur les Alouettes du Genre *Otocorys*. Par M. Alph. Dubois. Bull. Mus. Roy. d'Hist. Nat. Belgique, iii. 1884, p. 223.]

M. Dubois reviews the Larks of the genus *Otocorys*, and proposes to reduce the various forms to *one* species, which "may be divided into five or six races or varieties"! *Otocorys* is certainly a difficult group to handle, but we doubt whether this way of cutting the Gordian knot will be generally adopted. M. Dubois has, perhaps, never had the opportunity of examining specimens of *O. bilopha*.

88. *Dubois on the Hornbills.*

[Revue critique des Oiseaux de la Famille des Bucérotidés. Par M. Alph. Dubois. Bull. Mus. Roy. d'Hist. Nat. Belgique, iii. 1884, p. 18.]

M. Dubois uses Mr. Elliot's Monograph as a basis for a review of the Bucerotidæ. He proposes to reduce Mr. Elliot's nineteen genera to four—*Rhinoplax*, *Buceros*, *Alophius*, and *Bucorvus*—and many of the representative species to varieties. He describes and figures as a new species *Buceros leucopygius* from the Niam-Niam country, Central Africa, belonging to the section *Bycanistes*. He observes that *B. sabquadratus*, Cab., of the same group, is identical with *B. subcylindricus*, Sclater, in which we are disposed to agree with him. He characterizes a form from Lake Tanganyika, allied to *B. nasutus*, as *Buceros nasutus*, var. *dubia*.

89. *Garman on Polynomials in Zoology.*

[On the use of Polynomials as Names in Zoology. By S. Garman. Proc. Boston Soc. N. H. 1884.]

Mr. Garman urges various well-known objections to the use of polynomials in zoology, and in reply to the assertion that "there is no other and better method" of designating variations in form not sufficient for specific separation, explains a plan (which he has adopted in his 'List of North-American Batrachians and Reptiles') of using symbols attached to the binomial name, such as (A), (B), (C), (D). Thus "(D) *Amblystoma tigrinum*" would mean the fourth form of that Salamander. This symbol is prefixed, so as not to stand in the way of the authority.

90. *Gould's 'Birds of New Guinea.'*

[The Birds of New Guinea and the adjacent Papuan Islands, including any new Species that may be discovered in Australia. By [the late] John Gould, F.R.S. &c. Part XIX. Folio. London: 1885.]

The nineteenth part of this work, with the letterpress by Mr. R. B. Sharpe, contains figures of the following species:—

Cacatua gymnopis.
—— ducorpsi.
Cyclopsitta occidentalis.
Pristorhamphus versteri.
Urocharis longicauda.
Glycychæra fallax.
Carpophaga rubricera.
Ptilopus solomonensis.
Halcyon tristrami.
Pachycephala fuscoflava.
Zosterops brunneicauda.
—— uropygialis.
Myiagra fulviventris.

It would have been better to have taken the second figure in the plate of *Ptilopus solomonensis* from the female specimen—on which the species was first established—instead of giving two figures of the male bird.

91. *Gould's 'Supplement to the* Trochilidæ.'

[Supplement to the Trochilidæ, or Humming-Birds. By [the late] John Gould, F.R.S. &c. Part IV. Folio. London: 1885.]

The fourth part of the 'Supplement to the Trochilidæ' contains an account of twenty-nine species not included in the monograph, or concerning which further information was required. The species figured are:—

Campylopterus phainopeplus.
Diphlogæna hesperus.
Diphlogæna aurora.
Oreopyra calolæma.

Oreopyra cinereicauda.	Agyrtria taczanowskii.
Cœligena hemileuca.	Uranomitra viridifrons.
Agyrtria bartletti.	Timolia lerchi.
—— fluviatilis.	Eugenes spectabilis.

The fifth part will, we believe, conclude the work.

92. *Langille on North-American Birds.*

[Our Birds in their Haunts: a popular Treatise on the Birds of Eastern North America. By Rev. J. Hibbert Langille, M.A. 8vo. Boston: 1884.]

The object of this work, as the author tells us, is to "render as popular and attractive as possible, as well as to bring within a small compass, the sum total of the bird-life of Eastern North America." No systematic arrangement is employed, but the narrative "follows in the main the order of the seasons, and groups itself about certain interesting localities, such as the Niagara river and St. Clair flats." The book is written "almost entirely from personal observation." It is dedicated to Dr. Coues, whose scientific nomenclature is followed throughout.

93. *Lawrence on new Species of* Tyrannidæ, Cypselidæ, *and* Columbidæ.

[Description of supposed new Species of Birds of the Families Tyrannidæ, Cypselidæ, and Columbidæ. By George N. Lawrence. Ann. N.Y. Acad. Sci. iii. p. 156.]

Mr. Lawrence describes in the present paper three supposed new species from specimens collected in Yucatan by Mr. Geo. F. Gaumer during his recent (second) expedition in 1884. These are *Contopus albicollis*, *Chætura yucatanica*, and *Engyptila gaumeri*. Mr. Salvin (*suprà*, p. 193) has already stated his opinion that the last-mentioned specimen is not different from *E. jamaicensis*.

94. *Menzbier on the Blue Tits.*

[Mémoires sur les Paridæ.—1. Le Groupe des Mésanges Bleues (*Cyanestes*, Kaup). Par Michel Menzbier. Bull. Soc. Zool. France, 1884, pp. 239–302.]

This appears to be a carefully prepared and exhaustive treatise upon the present state of our knowledge of the Blue Tits (*Cyanistes*) and their distribution and varieties. M. Menzbier divides the group into two sections, "brevicaudates" and "longicaudates," with five species in the first, and two species and one subspecies in the second section. The synonymy, description, and distribution of each species are fully given, and the intermediate forms between *Parus pleskei* and *P. cyanus* and *P. cyanus* and *P. flavipectus* are described. The existence of these supposed "hybrids" leads the author into an important disquisition on the effect of crossing upon the extinction of species.

95. *'Mittheilungen' of the Ornithological Union of Vienna.*

[Mittheilungen des ornithologischen Vereines in Wien. 8 Jahrg, nos. 1–12, 1884.]

Dr. G. v. Hayek's excellent periodical is, as usual, devoted mainly to papers on the birds of "the fatherland" and adjoining districts and to other kindred subjects. But, as contributions of more general interest, we may venture to allude to Prof. Eugen von Boeck's "Ornis of the Valley of Cochabamba"; Collett's "*Alca impennis* in Norway"; and Drs. Radde and Von Pelzeln's article upon a collection of birds from the Caucasus (already alluded to). We are not aware that Cochabamba has been visited by a European naturalist since the valley was trodden by d'Orbigny in 1830. Prof. v. Boeck's list of birds, which has been carefully edited by Dr. W. Blasius, contains the names of eighty-seven species. Some of these are but approximately determined, and it is to be hoped that Prof. v. Boeck and Dr. Blasius will continue their communications upon this interesting subject. We may remark that *Rupicola saturata* (sive *sanguinolenta*) is a subspecies of *R. peruviana* peculiar to Western Ecuador, and that the Bolivian form is probably not identical.

96. *Newton on Ornithology.*

[Ornithology. By Alfred Newton, M.A., F.R.S., &c. Reprinted from the 'Encyclopædia Britannica' by special permission. For Private Circulation. 50 pp. 4to.]

Prof. Newton's excellent essay on ornithology will be read with pleasure and interest by every one who is attached to the fascinating study of birds. In the first part of the memoir is a most instructive account of the principal writers on ornithology, beginning with Pliny, and carried down to a recent, though, perhaps, not quite to the *most recent,* period. After works on general ornithology, those on faunas and the principal illustrated publications on birds are also shortly reviewed. But the latter half of the article, which contains an historical account of the progress made since the beginning of the present century towards a correct classification of the class Aves, will be that which will, perhaps, attract greatest attention. Prof. Newton rightly considers Blasius Merrem as the "virtual starting-point of the latest efforts in systematic ornithology," and traces the different ameliorations subsequently made down to the "systems" proposed by Sclater in this Journal for 1880. Much to our regret, Prof. Newton declines to propound his own arrangement of birds further than by showing that their primary division into Saururæ, Ratitæ, and Carinatæ can be regarded as thoroughly substantiated. But taking Sclater's arrangement of the Carinatæ for his text, he proceeds to make numerous criticisms thereupon, of the force of many of which the author of that arrangement is fully convinced. It is a misfortune, we venture to think, that these criticisms are so much more of a destructive than a constructive character, though we are glad to see that Prof. Newton has pronounced definitely on one or two controverted points, such as the alliance of *Cariama* to the Accipitres and the independence of the Striges from the Accipitres.

97. *Pagenstecher's 'Birds of South Georgia.'*

[Die Vögel Süd-Georgiens nach der Ausbeute der deutschen Polarstation in 1882 und 1883. Von Prof. Dr. Pagenstecher. [Jahrb. d. wissenschaftl. Anst. zu Hamburg, II.) Hamburg: 1885.]

The German expedition to the remote South-Atlantic island of South Georgia was quartered at Royal Bay in that island from the 21st of August, 1882, to the 5th of September 1883; and a collection of birds was made, of which the principal series was assigned by the German Polar Commission to the Natural-History Museum of Hamburg. Dr. Pagenstecher, the director of that institution, now gives us an account of the collection, comparing the avifauna of South Georgia with that of the somewhat similarly placed Island of Kerguelen in the South Indian Ocean, and adding remarks on the habits and breeding of the birds contributed by Dr. H. Will. Altogether 22 species of birds were met with in South Georgia, of which 18 were found to breed there, while the corresponding numbers for Kerguelen are 42 and 37. South Georgia differs from Kerguelen in having a resident Passerine bird—a Pipit, which has lately been described by Dr. Cabanis as *Anthus antarcticus*. The Sheathbill of South Georgia (*Chionis alba*) is represented in Kerguelen by a different species (*Ch. minor*). Whether the Teal of South Georgia is really the same as that of Kerguelen (*Querquedula eatoni*) seems to be rather doubtful. Besides these three species, the avifauna of South Georgia consists entirely of oceanic birds—Penguins, Petrels, Albatrosses, Gulls, Terns, and Cormorants.

98. *Protocol of the International Ornithologists' Congress.*

[Sitzungs-Protokolle des ersten internationalen Ornithologen-Congresses welcher unter dem Protectorate Sr. kaiserl. und königl. Hoheit des durchlauchtigsten Kronprinzen Erzherzog Rudolf, vom 7. bis 11. April, 1884, in Wien abgehalten wurde. 4to. Wien: 1884.]

This is the official account of the proceedings of the first meeting of the International Ornithologists' Congress, which was held at Vienna in April 1884, under the presidency of Dr. Gustav Radde. It is noteworthy that no official representative of Great Britain attended the meeting. There seems to have been some mismanagement here, either on the part of our authorities or of those of Vienna.

99. *Report of the Harvard Museum of Zoology.*

[Annual Report of the Curator of the Museum of Comparative Zoology at Harvard College, to the President and Fellows of Harvard College, for 1883–84. 8vo. Cambridge: 1884.]

A good work for ornithology has been done in 1884 by the Harvard Museum of Comparative Zoology by the issue, in two volumes of its 'Memoirs,' of the long-expected history of the Water-Birds of North America, already noticed above (pp. 97, 221). Mr. Agassiz, in his general report, seems rather concerned at the accumulation of the collections under his charge, and thinks that the resources of the Institution will hardly prove adequate to supply the additional room required for their storage and the new assistants for their care. Mr. Allen's special report on the mammals and birds tells us that the latter collection has been increased by the addition of 68 mounted specimens (58 species) and 107 skins (61 species)—the latter mainly to fill deficiencies in the North-American collection. There have also been added three mounted and three unmounted skeletons. The birds in the Systematic, South-American, and Australian Rooms have been labelled, and considerable progress has been made in the preparation of the systematic or index-catalogue of the skins.

100. *Ridgway on new Birds from Cozumel Island.*

[Description of some new Species of Birds from Cozumel Island, Yucatan. By Robert Ridgway. Proc. Biol. Soc. Washington, vol. iii.]

The present paper contains descriptions of the following new species and subspecies of birds from a collection made in Cozumel in January last by Mr. J. E. Benedict, of the U.S. Fish Commission:—*Harporhynchus guttatus, Troglodytes beani, Dendroica petechia rufivertex, Vireosylvia cinerea, Vireo bairdi, Cyclorhis insularis, Spindalis benedicti, Euetheia olivacea intermedia, Centurus leei, Attila cozumelæ, Lampornis thalassinus, Chlorostilbon forficatus, Empidonax gracilis, Myiarchus platyrhynchus, Cardinalis saturatus.*

Of these, *Harporhynchus guttatus* and *Spindalis benedicti* are, no doubt, the birds described by Mr. Salvin in our last number (*anteà*, pp. 187, 189) as *Harporhynchus melanostoma* and *Spindalis exsul.* The *Vireo* called by him *V. magister* is *V. cinerea* of the present paper; *Phonipara pusilla* = *Euetheia olivacea intermedia*; *Attila* sp.? perhaps = *A. cozu-*

melæ; *Centurus dubius* = *C. leei*; *Chlorostilbon caniveti* = *C. forficatus*.

Mr. Ridgway's paper is merely a preliminary one, and we look forward with interest to his promised fuller account.

101. *Rochebrune's 'Birds of Senegambia.'*

[Faune de la Sénégambie par A.-T. de Rochebrune. (Oiseaux.) Royal 8vo. Paris: 1884.]

An account of the birds of the French colony of Senegambia has long been wanting, and we are always glad to welcome a new worker into the wide field of ornithology, although it is necessary to say that we are not quite satisfied with the present volume. Dr. Rochebrune gives us an account of 686 species of birds which he attributes to the fauna of Senegambia. Of these *Scotopelia oustaleti*, *Psittacus rubrovarius*, *Ægithalus calotropiphilus*, *Nilaus edwardsi*, and *Estrelda savatieri* are said to be new discoveries; but the *Psittacus* is certainly only a variety of *Ps. erithacus*, and we are a little suspicious about some of the other supposed new species. But the important question is whether we may safely rely on the author's assertions that all the 686 species mentioned in the work are to be found within the limits of Senegambia. For example, Dr. Rochebrune maintains that he has "seen and hunted" three different species of *Bucorvus* (usually supposed by those who admit them to be geographical representatives of each other), all in Senegambia. Dr. Rochebrune likewise includes in his list *Gyps rueppelli*, *Pœocephalus robustus*, *Schizorhis leucogastra*, and many other species hitherto believed to be confined to Eastern and Southern Africa. Now we ask, in all seriousness, has our author actually procured in Senegambia examples of all these species, and have they been determined by competent authorities, or are they only identified by recollection? It would have been much more satisfactory to have followed Count Salvadori's excellent plan of giving a list of the specimens of each species obtained, with their exact dates and localities.

As regards what Dr. Rochebrune calls the "ovologie" (!) of his volume, we fear, again, there must be some errors. Does

Cuculus solitarius really nest in the "trous des vieux arbres"? If so, it is a most remarkable Cuckoo. Are the eggs of *Pogonorhynchus* really spotted, as stated p. 108, and figured pl. xxix. fig. 3? Does the Tufted Umbrette in Senegambia lay such eggs as are figured in plate xxiv.? If so, former excellent authorities on this subject have been egregiously deceived. Dr. Rochebrune seems to be well pleased with his coloured plates, and there is, indeed, much spirit in some of the drawings; but the colouring is, in some cases, awful. Nor can we see any use or excuse for such barbarisms as "Strigi"! "Columbi"! "Steganopodi"! &c. Dr. Rochebrune's hallucinations as regards Nitzsch and the aftershaft have been already treated of by Mr. Beddard (Ibis, 1885, p. 19), so we need say nothing more on this part of the subject, except that our author appears to be too great a patriot to allow that anything good can come out of Germany.

102. *Saunders's Edition of 'Yarrell's British Birds.'*

[A History of British Birds. By the late William Yarrell, V.P.L.S., F.Z.S. Fourth Edition. Revised to the end of the Second Volume by Alfred Newton, M.A., F.R.S.; continued by Howard Saunders, F.L.S., F.Z.S. Parts XXIX. & XXX. 1885.]

Parts XXIX. and XXX. conclude the Ducks and Mergansers and the entire work. A short preface to Vol. III. contains some remarks on the species which have been added to the British list during the progress of this edition, and not figured or fully described in it.

103. *Sharpe on the* Fringilliformes.

[Catalogue of the Passeriformes, or Perching Birds, in the Collection of the British Museum. Fringilliformes: Part I., containing the Families Dicæidæ, Hirundinidæ, Ampelidæ, Mniotiltidæ, and Motacillidæ. By R. Bowdler Sharpe. London: 1885. 682 pp., 12 coloured plates.]

Mr. Sharpe's unrivalled energy has already produced another contribution to the British Museum Catalogue of Birds, which has thus reached its tenth volume. Mr. Sharpe now commences the great group of nine-primaried Oscines—the "Tanagroid Passeres" of Wallace, which he prefers to call "Fringilliformes," and gives us an account of five "families"—the Dicæidæ, Hirundinidæ, Ampelidæ, Mniotiltidæ, and Motacillidæ. Besides these he embraces the members of the genus *Polioptila,* which, as he rightly states, is quite out of place here, and ought to have been inserted in a previous volume. But is he not a little severe on Mr. Seebohm for rejecting *Polioptila,* when, as he allows, its most natural place is among his own Muscicapidæ? Altogether 448 species are treated of in the present volume, illustrated in the National Collection by 4590 specimens. Of these 88 are "types." Of 32 species allowed as good, the British Museum has not yet acquired examples. Among the Dicæidæ, which our author admits "cannot be defined in exact terms," Mr. Sharpe includes the anomalous Hawaian genera *Hemignathus, Drepanis,* and their allies, which will eventually, we suspect, be allowed to constitute a distinct family. At any rate, *Dicæum* should not have been put in the middle of them. The "family" is rendered further irregular by the fact that 7 out of the 13 genera present a "distinct bastard primary," —that is, are really *not* nine-primaried! Similar difficulties to those who stick to the division of the Oscines solely by the number of their primaries will be found to occur in the Vireonidæ, Fringillidæ, and Alaudidæ.

In the present volume Mr. Sharpe has rejected all trinomial designations, but admits occasional subspecies with binomial names.

The following species and subspecies are provided with new names :—*Dicæum sulaense, Cotile shelleyi, Petrochelidon timoriensis, Dendrœca granadensis, Basileuterus auricularis, B. meridanus, B. roraimæ, B. bolivianus, B. veraguensis, Setophaga guatemalæ, Polioptila sclateri, P. lactea, Motacilla xanthophrys.*

The following generic terms seem to be new :—*Pinaroloxias* for *Cactornis inornata,* Gould; *Xanthocorys* for *Anthus nattereri,* Sclater; and *Oreocorys* in place of *Heterura,* Hodgson, previously used.

Twelve nicely drawn plates by Keulemans conclude the volume.

104. *Shufeldt on the Osteology of* Ceryle alcyon.

[Osteology of *Ceryle alcyon.* By R. W. Shufeldt. Journ. Anat. & Phys. xviii. p. 279.]

Dr. Shufeldt gives a careful account of the osteology of this bird and some excellent illustrations. But we do not quite understand him when he says that some Kingfishers "possess zygodactylous feet, agreeing in this respect with the Bucerotidæ" (!). Is the word "zygodactylous" here a misprint for "syndactylous. Neither Kingfisher nor Hornbill has what is usually called a "*zygodactylous*" foot.

105. *Shufeldt on the Osteology of* Numenius longirostris.

[Osteology of *Numenius longirostris,* with Notes upon the Skeletons of other American Limicolæ. By R. W. Shufeldt. Journ. Anat. & Phys. xix. p. 51.]

Another elaborate memoir by Dr. Shufeldt, likewise illustrated by two well-drawn plates. The comparisons of the various bones of *Numenius* with those of other Limicolæ give this treatise greater interest in a systematic point of view than some of those which have preceded it.

106. *Traquair on Biological Nomenclature.*

[Remarks on Biological Nomenclature. Introductory Address delivered before the Royal Physical Society of Edinburgh, 19th Nov., 1884. Session 1884-85. By R. H. Traquair, M.D., F.R.S., F.G.S.]

Those who wish to understand the question of Biological Nomenclature, concerning which so much discussion has lately taken place, both in this country and in America, will do well to read Dr. Traquair's recent Presidential Address to the Royal Physical Society of Edinburgh. The whole subject is here explained in simple language, and without strong bias in favour of any of the contending parties. At the same time Dr. Traquair gives us clearly to understand that he does not much approve of trinomials, the time not yet having arrived "for any radical interference with the binomial system." Neither do we quite like trinomials, yet it is difficult to see how in certain cases their use can be avoided.

107. *Tschusi zu Schmidhoffen on the Long-tailed Tits of Europe.*

[Bemerkungen über *Acredula caudata*, Linn., und *Acredula rosea*, Blyth. Von v. Tschusi zu Schmidhoffen. Mitth. orn. Ver. Wien, 1884, p. 103.]

This accurate student of the European ornis tells us that in the district of Salzburg not only do both the (so-called) species *Acredula rosea* and *A. caudata* occur, but also every possible form intermediate between the pure white-headed and the black-striped birds.

108. *Tschusi zu Schmidhoffen on the Summer Duck in Styria.*

[*Anas sponsa*, Linn., in Steiermark. Von v. Tschusi zu Schmidhoffen Mitth. orn. Ver. Wien, 1884, p. 30.]

The author gives several instances of the occurrence of the Summer-Duck of North America (*Æx sponsa*) in Styria (on the Mur near Gratz, in December 1883, and on the Kainach several years before). But there can be little doubt that these are either birds escaped from ornamental waters or descendants of imported birds, the Summer-Duck being a purely Nearctic species, replaced in Northern Asia by *Æx galericulata*.

109. *Vorderman on the Birds of Batavia.*

[Bataviasche Vogels.—Part VI., and Alphabetische Index. Door A. G. Vorderman. Natuurk. Tijds. v. Nederl. Indië, Deel xliv. Afl. 3.]

Mr. Vorderman now gives us a sixth part of his 'Batavian Birds' and an Index to conclude the series. Altogether in the six parts 182 species have been described and 10 others mentioned in an appendix. But we should imagine that the number of birds to be found within a reasonable distance of Batavia must be far greater than this.

110. *Vorderman's 'List of Javan Birds.'*

[List of the Birds from Java. Compiled by A. G. Vorderman. Natuurk. Tijds. v. Nederl. Indië, Deel xliv. Afl. 3.]

This is a nominal list of the birds of Java, compiled from the works of Horsfield, Temminck, Bonaparte, Schlegel, and other authorities, and arranged on the system of Prof. Schlegel's 'Dierentuin." 404 species are enumerated, of which the author claims 14 as due to his explorations of the neighbourhood of Batavia and Mount Salak. Of these 14, one, *Brachypteryx salacensis,* is stated to be new, but no description is given. We are glad to be told that Mr. Vorderman has in preparation a monograph on the birds of Java, on the same plan as Salvadori's excellent work on the birds of Borneo.

111. '*The Young Oologist.*'

[The Young Oologist. Vol. I. No. 10. 8vo. Gaines, N. Y.: 1885.]

We have been favoured with a specimen-copy of this newly started journal, which contains a series of communications upon the birds and eggs of North America, and seems likely to foster the study of field-ornithology in the United States.

XXXIII.—*Letters, Announcements, &c.*

We have received the following letters addressed to the Editors of 'The Ibis:'—

Irchester Vicarage, Wellingboro',
April 16, 1885.

Sirs,—I am concerned to find that the specific name *cinerascens* cannot stand for my *Parus,* described in the last number of 'The Ibis,' having been previously given to another Titmouse (*P. afer,* Gmelin) by Vieillot (Nouv. Dict. xx. p. 316, 1818); I therefore propose that it should be known as *Parus sarawacensis.*

Yours &c.,
Henry H. Slater.

Hawksfold, Fernhurst, Haslemere,
May 23, 1885.

Sirs,—That the birds of the island of Cozumel should have remained unnoticed for upwards of forty years, and have then supplied two collections, to Mr. Ridgway and myself, almost at the same moment, is unfortunate only as regards the last coincidence, inasmuch as we have supplied several birds each with a superfluous name.

My reason for writing this letter is to ascertain which name is applicable in future to these species.

The facts are these:—My paper was published in your pages on or about April 5 of the present year.

Mr. Ridgway's will form part of the third volume of the Biological Society of Washington, 1884–85. Extra copies of this paper were printed on "February 26, 1885," and posted by Mr. Ridgway to his friends on March 2nd.

The date of its publication I am, as yet, unable to supply.

Personally I am quite ready to accept Mr. Ridgway's names; but I think no harm can be done by asking what is the status of names issued in an "extra" in advance of the actual publication of the periodical of which they are to form a part.

The date of printing is, of course, nothing, and it seems to me that the distribution of printed copies by an author does not technically differ from sending written letters to the same effect to his various correspondents.

Publication is something more than this. I believe that our practice in England is not to issue "extras" to authors until after the actual publication of the paper, and this seems to me to be the right course. In America a different system seems to prevail, and authors can have copies of their papers often many months before their formal publication. In by far the majority of cases no harm is done. Occasionally, as in the present instance, a preliminary distribution clashes with an actual publication.

Yours &c.,
Osbert Salvin.

Anniversary of the British Ornithologists' Union.—The Annual Meeting of the B. O. U. was held at 6 Tenterden Street, on Wednesday, the 20th May, at 6 p.m., Mr. Sclater in the Chair.

The Minutes of the last Meeting having been read and confirmed, the B. O. U. Committee presented the following Report:—

Your Committee have much pleasure in pointing out that the B. O. U. continues in a prosperous condition. As compared with last year the finances are in a very satisfactory state, more than half the heavy debt incurred by the publication of the 'Ibis List of British Birds' having been wiped off, while by careful economy the expenses of publication of the Journal have been decreased.

At the last Anniversary Meeting the number of Members amounted to 150, viz.:—124 Ordinary (Mr. Foster having been returned in error as dead), 1 Extraordinary, 9 Honorary, and 16 Foreign Members. At the present Anniversary the total number of Members on the roll has been increased to 174, viz.:—146 Ordinary, 1 Extraordinary, 8 Honorary, and 19 Foreign Members. The Committee are pleased to be able to say there has been only one death among the Members, viz. that of Mr. Arthur Basil Brooke, whose loss will be sincerely regretted by all the Union. The only other vacancy is that caused by Major G. F. L. Marshall, who has resigned. There are 9 Candidates for admission at this Anniversary.

The Accounts for 'The Ibis' for 1884 were then discussed and passed, and the following new Members were balloted for and elected:—James Backhouse, Jun., West Bank, York; Hugh G. Barclay, F.R.G.S., Thorpe, Norwich; Capt. E. F. Becher, R.A., F.Z.S., Southwell, Notts; William Fitzherbert Brockholes, Claughton-on-Brock, Garstang, Lancashire; F. H. H. Guillemard, M.D., Eltham, Kent; Sir Ralph Payne-Gallwey, Thirkleby, Thirsk; George Lawson, C.B., 36 Craven Hill Gardens, Hyde Park, W.; John Marshall, F.L.S., Belmont, Taunton; Edward Neale, 6 Tenterden Street, W. The President and Secretary having been re-elected, Mr. W. T. Blanford, F.R.S., was elected on the Committee in place of Captain Shelley, who retired by rotation.

A vote of thanks to the Chairman (as also to Captain Shelley for the use of his room) was proposed by Mr. F.

DuCane Godman, seconded by Mr. Howard Saunders, and carried unanimously.

The Meeting then adjourned, and the Annual Dinner was held at the Café Royale, and was attended by about twenty-five Members and guests.

New Ornithological Work.—We are glad to hear that Mr. Edward Bartlett, Curator of the Maidstone Museum, has been for some years collecting materials for a great work on the Ploceidæ and Fringillidæ, upon which his MS. is becoming very voluminous. He has besides a fine collection of the birds themselves, and will feel truly grateful for odd papers or notes on any of the species. Mr. Bartlett says that the work has been a labour of love to him, with little idea of compensation, and he hopes it will be of value to science, as well as to persons who are fond of this beautiful group of birds in confinement.

Prjevalsky's New Expedition.—The 'Times' of May 25th publishes a letter from Col. Prjevalsky dated Lob Nor, Feb. 10th, in which he states that the collections of natural history during the present expedition "are not inconsiderable. The poorest is that of the birds—1000 specimens—of which one only is new, *Leucosticte robowoskii.*"

"We have passed the autumn and winter in the western regions of Zaidan and Northern Tibet, where we made many geographical discoveries. We arrived at Lob Nor yesterday, and shall pass the month of February here, observing the migration of birds. In March we shall start for the town of Kiria, where our collections, loaded on ten camels, will remain, while we pass the summer in the mountains of Northern Tibet, with the intention of re-entering Turkestan in the autumn. We have heard no news from Europe for twelve months, and have not seen another human being for three months."

The Ridgway Ornithological Club, Chicago, U.S.A.—March 5th, 1885. J. L. Hancock read a paper on the Birds of Corpus

Christi, Texas, recording ninety-four species observed in March and April 1884.—April 2nd. A specimen of Swainson's Warbler (*Helmintherus swainsoni*), lent by Mr. Brewster, was exhibited. A paper was read by Dr. Gibbs on the Woodpeckers of Michigan. Mr. H. K. Coale gave a bird-skinning exposition.—May 15th. Mr. Coale read a paper containing notes on the Birds of Arizona.

Birds breeding in Ants' Nests.—Two interesting letters on this subject have lately appeared in 'Nature.' These, with the kind permission of the Editor of 'Nature,' we reproduce. The first is from Mr. W. Davison, who writes from Ootacamund, Jan. 18th, and says, in reply to inquiries from Mr. Grant Duff ('Nature,' vol. xxxi. p. 438):—

"The Southern Chestnut Woodpecker (*Micropternus gularis*) always, as far as I have observed, uses an ants' nest to nest in, and Mr. Gammie, the Superintendent of the Government Cinchona Estates at Mongphoo, near Darjeeling, has noticed the same thing with regard to the allied northern species, *Micropternus phaioceps*; and the peculiarity probably extends also to the allied species found in Burmah, Siam, &c.

"Mr. Gammie thinks that when an ants' nest has been taken possession of by the bird the ants desert the nest. This is a point on which I cannot speak with certainty. Mr. Gammie has taken nests of the northern species in which, although the bird had laid, the ants remained, and he has taken other nests where not a single ant remained; but there is nothing to show that these nests were not deserted before the bird took possession. I myself have taken nests of the southern form, in which, though the eggs were partially incubated, the ants remained, showing that some considerable time must have elapsed since the bird took possession. This is a point that I hope to be able to elucidate within the next few months, when the birds will be breeding.

"When *Micropternus* is breeding the feathers of the head, tail, and primaries of the wings get covered with a viscid matter, having a strong resinous smell, and this substance is usually rather thickly studded with dead ants (*vide* 'Stray Feathers,' vol. vi. p. 145).

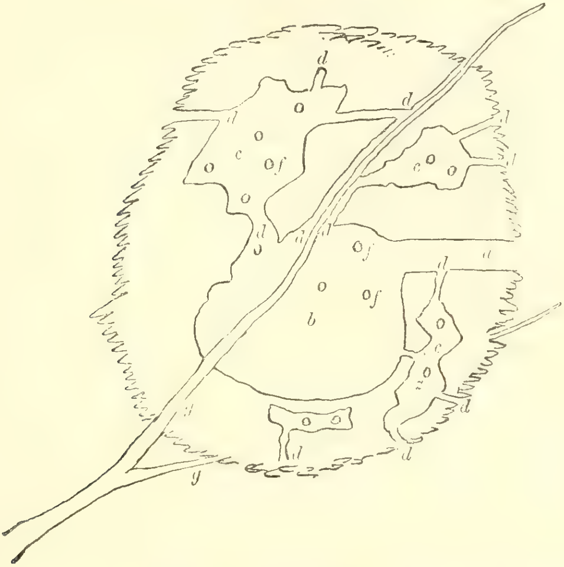
"Two species of Kingfishers also to my knowledge nidificate in ants' nests—viz. *Halcyon occipitalis,* confined to the Nicobar Islands, and *H. chloris,* which ranges from India as far south as Sumatra.

"At Mergui, in South Tenasserim, I found a nest of *H. chloris* in a hornets' nest, and although I saw the birds repeatedly enter the hole they had made in the hornets' nest the hornets did not seem to mind it, but they resented in a very decided manner my attempt to interfere with the nest."

In the number of 'Nature' for May (vol. xxxii. p. 52) is the following letter from Mr. Charles Bingham, Deputy Conservator of Forests, British Burmah, on the same subject:—

"Camp Meplay, Thoung-yeen Valley, Tenasserim,
April 20, 1882.

"This morning, in going from my camp to the Meplay Forest Reserve, I had to pass through several densely overgrown phonzohs. While making my way along with some difficulty, I startled a brown Woodpecker (*Micropternus phæoceps*) from a small pyingado tree (*Xylia dolabriformis*). Looking up into the branches I saw a large ants' nest, in the centre of which appeared a circular hole so exactly like the borings made by Woodpeckers ordinarily in the trunks of trees, that I sent up a Karen boy who was with me to ascertain whether it was possible the *Micropternus* had been boring into the ants' nest, as I had heard was the bird's curious habit. The ants' nest was only about ten feet above the ground, placed in the fork of the pyingado, two small branches of which passed clean through it. Climbing up, putting in his fingers and then a twig, my Karen follower announced that there were two eggs. Leaving the nest alone for the time being, in the evening I returned by the same route, and was able not only to cut off and carry into camp the whole nest as it was; but I managed to secure also the bird as she flew from the eggs. Arrived in camp, I got the two eggs out, and then very carefully made a cross-section through the ants' nest, so as to divide the boring made by the Woodpecker longitudinally.



a, entrance-tunnel made by Woodpecker; *b*, retort-shaped nesting-chamber of Woodpecker; *c*, excavations made by the ants; *d d d . . . . d*, entrances to them; *f f f . . . . f*, tunnels made by the ants; *g g*, fork of pyingado branch—one twig passing through the egg-chamber excavated by the Woodpecker.

"The accompanying is a rough diagrammatic sketch of the appearance of the cross-section of the nest as hollowed out by the Woodpeckers. The ants' nest was a large spherical solid mass of leaves and clay, the leaves outside being arranged one over the other something like the tiles on the roof of a house, but riddled in many places with the entrance-tunnels made by the ants—a small black and red species of *Myrmica*, the trivial or specific name of which I do not known. It is probably closely allied to the *Myrmica* mentioned by Sir J. Lubbock in his 'Ants, Bees, Wasps,' as having been described by Sykes in the 'Trans. Ent. Soc.' vol. i. Very few of the ants remained in the nest, and the few that were about seemed agitated and stung virulently. Probably the mass of them had been driven off or eaten by the Woodpeckers. The tunnel the latter had made was about two inches in diameter and four inches long, bored horizontally in, and ending in an irregular-shaped egg-chamber about ten and a half inches in cross diameter, but narrowed by the branch of pyingado, which pierced the nest through and through, and crossed the egg-chamber diagonally. The bottom of this chamber alone was smooth, but there was no lining, and the two translucent white eggs of the Woodpecker had rested on the bare boards, so to speak, of the ants' house. In the excavations *c c c* made by the ants themselves there were neither eggs, larvæ, nor pupæ; probably these all had been removed when the Woodpeckers invaded the nest."

Birds at Scotch Lighthouses.—At the meeting of the Royal Physical Society of Edinburgh held on the 20th of May last, the Secretary drew the attention of the meeting to several interesting birds that had been taken during the month on the island of May by Mr. Agnew, lighthouse keeper, and forwarded to Mr. J. A. Harvie-Brown, in whose collection they have since been placed. These were two specimens of the Ortolan Bunting and others of the Pied Flycatcher and Red-backed Shrike. The Secretary remarked that these birds had appeared during their spring migration, and that in the case of the Ortolan Bunting, the capture proved that any Scotch specimens of the birds that have been recorded could not be said to be escaped birds, seeing that they had been in company with well-known migratory species, and were in all likelihood on their way to Scandinavia, where they are known to breed.

Mr. R. B. Sharpe's Departure for Simla.—In our last Number (*suprà*, p. 236) we spoke of the negotiations going on for the transfer of Mr. Hume's celebrated collection of Indian birds to the British Museum. Mr. Sharpe started for Simla the end of April to superintend the packing of the collection, which will shortly be on its way home. Writing from the s.s. 'Ancon,' in the Red Sea, on May 5th, he complains much of the intense heat. "It is just as well," he says, "that one of the Editors of 'The Ibis' is not on board. He would tear his hair at seeing about twenty specimens of *Larus hemprichi* in full breeding-plumage following the ship, and not to be got at. But I hope to obtain some at Aden. A small Tern of the group *S. minuta* was common near Suez, and again off Perim, where a larger Tern with a black head also appeared in pairs. The only other birds seen were a few Gannets (brown with belly white) and a Kite and a Stonechat going north."

Obituary.—Ernest William White, whose untimely death was briefly recorded in our last Number, was born at Eythorne, near Dover, on the 20th June, 1858, and when six years of age accompanied his parents to South America. Very delicate from birth, it was with great difficulty that he was reared. Books were forbidden him, and thus, untrammelled, he roamed abroad and communed with nature, early displaying a fondness for everything that lived. But it was when Henry Durnford came to Buenos Ayres that White's passion for natural history burst forth. They were bosom companions, and it was only by his father's command that White was debarred from accompanying Durnford in his last ill-fated expedition.

At his own request White was now sent to London to make the acquaintance of naturalists. He there became a Fellow of the Zoological Society of London, and entered into arrangements with Mr. Edward Gerrard, jun., to perfect himself in the preparation of specimens. During his residence in London, White, in his passion for learning, took no heed of weather, and thus developed tuberculosis, the seeds of which were in him from his birth. He was consequently called home, and on the voyage burst a blood-vessel on the lungs and lost a great quantity of blood. He scarcely reached home alive, and was then instantly despatched to Mendoza, where he was enabled to gratify his passion for natural history in a new and little-explored region and, by roughing it, to regain health and strength.

For five years in this district White roamed about, sleeping amongst the snows, travelling on mule-back, battered and tossed by wind and rain, dust and heat, until at last he returned home robust, and sought for a wife ready to accompany and aid him in future toil. He found her and married; and then the next thing was to consider, as he had now contracted obligations, how to choose a profession that should first pay the expenses of his future explorations, and secondly occupy the minimum of time in preparation.

His first idea was medicine, which he had studied in Buenos Ayres previously; but considering that all the dentists of Buenos Aires are rich men, and that the teeth of Argentines are about the worst in the world, he fixed upon dentistry, which he could combine with natural history in his projected travels, wherein he was determined to exhaust the Argentine Republic.

White first tried the London schools; but the restrictions were so onerous and the climate so bad, that he was forced to migrate to Philadelphia. Here, after his two years' course, he was on the point of attaining his qualification, when a wave of malignant typhoid fever swept over the city and carried White away amidst its earliest victims, on the 29th of November last, at the early age of 26 years.

DR. EDUARD RÜPPELL.—The death of Dr. Eduard Rüppell, of Frankfort-on-the-Main, which we announced in our last Number (see p. 238), cannot be allowed to pass in this Journal without honourable notice of so eminent a traveller and naturalist.

Dr. Rüppell was born in Frankfort on the 20th November, 1794, the son of an official in the postal service of the Grand Duchy of Hesse. After leaving the Gymnasium he was placed in business; but his love for natural history led him to visit Egypt as early as 1817, after which he became resident in Italy. The assistance rendered to him by the Senckenbergian Society of Naturalists, which was founded in that year in his native city, enabled Rüppell to attend regular classes at the Universities of Pavia and Genoa, and thus to prepare himself carefully for scientific travel. The result was the two great expeditions of 1822 and 1832. In the first of these Rüppell explored Egypt, Nubia, and Kordofan. This expedition, as well as the second, of which the object was the exploration of the then almost unknown fauna of Abyssinia, resulted in the discovery of a large number of new species in every branch of natural history, besides establishing many others up to that time very little known. The number of new birds discovered by Rüppell amounted to 130 at least, and his labours in the cause of ornithology in these countries must always place his name amongst those of the first rank in the history of the birds of Africa. Indeed Rüppell's works have formed the ground upon which all subsequent labours on the ornithology of North-eastern Africa have been based.

The three works which bring everlasting fame to the name of Rüppell are:—(1) The 'Atlas zu der Reise im nördlichen Afrika,' published at Frankfort in 1826; (2) his 'Neue Wirbelthiere zu der Fauna von Abyssinien gehörig' (Frankfort, 1835); and (3) his 'Systematische Uebersicht der Vögel Nordost-Afrika's' (1845).

The last-mentioned work, in 8vo, contains a summary of the ornithological portions of the two former, and is further remarkable for the excellent illustrations annexed to it, prepared by the master hand of Joseph Wolf. Besides these great works Rüppell published several smaller ornithological memoirs, chiefly in the 'Abhandlungen' of the Museum Senckenbergianum. He also contributed a paper containing descriptions of two new species of Touraco to the 'Transactions of the Zoological Society of London,' of which Society Rüppell was at the time of his death the senior Foreign Member.

As is well known, Rüppell gave the whole of his rich collections to the Senckenbergian Institution of his native city, where every opportunity is offered to those who wish to examine the typical specimens. It is also to one of Rüppell's trained collectors, Martin Bretzka, that science is indebted for our first acquaintance with the birds of Shoa, in Southern Abyssinia. Rüppell died at Frankfort in the 91st year of his age.

We are much indebted to Dr. H. Schalow for the subjoined notice of Dr. Richard Boehm, the well-known African traveller and ornithologist:—

Dr. Richard Boehm.—By a short note, received through Dr. Gerhard Rohlfs, of Zanzibar, we are informed of the death of the well-known young zoologist Dr. Richard Boehm. The words of the telegram leave no doubt that the unfortunate traveller has been murdered by the wild tribes westward of lake Tanganyika, but the exact locality where this took place is not yet known. It is much to be regretted that all the rich ornithological collections and most of the notes made during Boehm's five years' stay in Eastern Africa have been lost, except a few specimens collected in Kakoma and on the Ugalla river. In this lamentable way has ended, at the early age of 30 years, the career of one of the most promising young zoologists of Germany. Richard Boehm was born at Berlin, October 1st, 1857, the eldest son of Dr. Boehm, a distinguished physician. After his zoological studies at the Universities of Jena and Berlin, under the direction of Haeckel, Peters, Cabanis, and others, Boehm devoted himself especially to ornithology, and prepared for his African travels. In April 1880 he left Germany. During the following five years he visited the countries between Zanzibar and Lake Tanganyika, mostly never explored by a zoologist. In 1882 all the collections, journals, maps, and drawings of Boehm were destroyed by fire. A year later the traveller received two shots through his thigh from a native. After his recovery he set out to explore the country near lake Moero (between long. 28° E. and lat. 8° S.), never visited by any European naturalist, and here, probably, he met his death.

Among the scientific papers of the late Dr. Boehm, we may call special attention to "Helgolander Leptomedusen" (Jenaische Zeitschrift, Band xii.), "Ueber die Pycnogoniden"

(Bericht der Akad. d. Wissensch. Berlin, 1879; often mentioned and well spoken of in Hoek's Pycnogonidæ of the 'Challenger' Expedition), besides various papers on African ornithology published in the 'Ornithologisches Centralblatt' and in the 'Journal für Ornithologie.' A short account of the birds collected by Boehm has been published by Dr. Schalow (J. f. O. 1883, p. 337); a second paper will follow in the next number of that periodical.

To Boehm are dedicated the genus *Boehmia* of Hoek and many species of Eastern African birds.

News of Dr. Finsch.—Our excellent correspondent Dr. O. Finsch of Bremen, who disappeared from Europe somewhat mysteriously more than a year ago, and was generally supposed to have been sent off by Prince Bismark to take possession of New Guinea for the Fatherland, writes to us from Mioko, Duke-of-York Island, under date of the 27th of February last. Dr. Finsch preserves a judicious reticence as to the exact business he has been transacting, but admits that he has "travelled a good deal in New Guinea, and visited parts of that island where scarcely any white men have been before." But he also announces an important ornithological discovery. At Cooktown, in the preceding month, he had purchased a fine collection of birds just made on the southern slopes of the Owen-Stanley range, in New Guinea, at an elevation of from 7000 to 8000 feet. Amongst many rare birds in this collection were some quite new and of great beauty—a new Paradise-bird of prevailing *blue* colour and a new form allied to *Astrapia*, both generically distinct, and a most wonderful new *Amblyornis*, with a bright flame-coloured crest. These novelties have been transmitted to Dr. A. B. Meyer, of Dresden, for description.

New Expeditions.—Mr. H. O. Forbes, having issued his 'Naturalist's Wanderings in the Eastern Archipelago,' with a full account of his last journey, has started again for the East, this time having the Owen-Stanley range, in New Guinea, for his principal object. He will call at Taentre and pick up his trained staff of Moluccan bird-hunters. Mr. Forbes has, we believe, received excellent promises of support from some of the Australian colonies, and bears letters of introduction to Sir Peter Scratchley, the newly appointed Governor of "Torresia," as, we suggest, the portion of Southern New Guinea which Prince Bismark has kindly allowed us to retain ought to be called.

Two pupils of Prof. Moseley, who have recently distinguished themselves in the "Science Schools," are likewise shortly leaving England for opposite quarters of the globe. Mr. G. C. Bourne departs for Diego Garcia, the southernmost island of the Chagos group, in the Indian Ocean, never before visited by a naturalist, and said to be tenanted by peculiar land-birds and other endemic creatures. Mr. W. L. Sclater goes to British Guiana, to spend the winter under the hospitable roof of Mr. E. F. im Thurn, when he will pay some attention to the birds of the Pomeroon River, and especially to the four-footed embryos of *Opisthocomus* (*suprà*, p. 118), if he can find them! Both these youthful explorers have promised to report progress to the Editors of 'The Ibis.'

New Work on the Swallows.—Messrs. Henry Sotheran & Co. have issued the prospectus of a 'Monograph of the Hirundinidæ,' or Family of Swallows, to be prepared by Mr. R. Bowdler Sharpe and Mr. Claude W. Wyatt. The work will be issued in parts at 10*s.* 6*d.* each, and completed in seventeen or eighteen parts, of which Mr. Sharpe will prepare the letterpress and Mr. Wyatt the plates. It will be nearly uniform in general character with the well-known 'Monograph of the Kingfishers' by the former.

THE IBIS.

FIFTH SERIES.

No. XII. OCTOBER 1885.

XXXIV.—*Additional Notes on the Ornithology of Transvaal.* By THOMAS AYRES. Communicated by JOHN HENRY GURNEY.

[Continued from 'The Ibis,' 1884, p. 233.]

[IN the following notes the species not previously recorded from the Transvaal by Mr. Ayres are numbered consecutively with his previous lists.—J. H. G.]

GYPS RUEPPELLI, Bon. Rüppell's Vulture.

Male, Vaal river near Potchefstroom. Total length 27 inches, wing 22·5, tail 10·5, tarsus 4, bill from gape 2·25, middle toe with claw 5·25.

My brother, whilst shooting some thirty miles down the Vaal river, found these Vultures breeding rather plentifully, and brought me from one of their nests an egg which measures 3·75 × 2·75 inches. This egg, which was taken 15th June, 1884, still (March 1885) smells very strongly of the musky odour peculiar to the Vultures; the egg was somewhat incubated, and as there was but one in the nest, that is probably the number usually laid. It is a white egg, very sparsely and rather faintly marked with reddish-brown spots of eccentric shapes, which are rather more numerous at the thick end of the egg than elsewhere; the shell is rough and chalky; the nest was a ponderous structure of rough sticks placed on the top of a large and very thorny mimosa.

CIRCAËTUS PECTORALIS, Smith. Black-chested Harrier-Eagle.

In the winter of 1883 but very few of these Eagles appeared in the neighbourhood of Potchefstroom, but the following winter not less than a dozen made their appearance and were seen soaring round on various occasions. Dan Voorie, a Dutch sportsman here, tells me that he saw one take a hare and, carrying it a considerable height, let it fall, doubtless for the purpose of killing and eating it; but toads, frogs, lizards, and snakes appear to be the principal food of this species.

TINNUNCULUS CENCHRIS (Naum.). Western Grey-winged Kestrel.

Female, shot near Potchefstroom, 25th October, 1883.

In October 1883 this species was plentiful in the patches of mimosa bush near Potchefstroom; in a female which I shot the stomach was crammed with large spiders.

TINNUNCULUS RUPICOLOIDES (Smith). Greater South-African Kestrel.

In 'The Ibis,' 1869, p. 288, I spoke of these Kestrels as "tolerably common in the open country surrounding Potchefstroom," but they are now decidedly fewer in number in this neighbourhood.

369. SCOPS CAPENSIS, Smith. Cape Scops Owl.

Male, shot 25th October, 1883. Iris light yellow.

Mr. Lucas sent me this scarce little Owl from the Rustenburg district, where it is just as difficult to get as elsewhere; generally one only meets with these Owls by chance, and it is very difficult to see them in the dusk of the evening as they sit quietly in a tree, and there utter their monotonous *kroo-kroo.*

MEROPS APIASTER, Linn. European Bee-eater.

Three males shot at Potchefstroom, 26th October, 1883;

one adult, with the iris crimson, the other two younger birds, with the iris reddish brown.

MEROPS PERSICUS, Pall. Blue-cheeked Bee-eater.

These Bee-eaters breed in considerable numbers during our summer months in the banks of the Vaal river, twenty or thirty miles from Potchefstroom. I am not aware that they breed elsewhere hereabouts, though there are other localities apparently suitable.

MEROPS NUBICOIDES, Des Murs. Carmine-throated Bee-eater.

Shot near the junction of the Crocodile and Notuane rivers, in January 1884, by Mr. Lucas, who wrote to me in February that this species is more numerous amongst the Magaliesbergen than it used to be in former years, when it was scarcely known in the Rustenburg district; now it is by no means uncommon. This Bee-eater appears to assume its nuptial dress later than most of the family, not acquiring its best plumage till the latter end of December.

370. HALCYON SEMICÆRULEA (Forsk.). African White-headed Kingfisher.

The specimen sent is the first I have seen or heard of in this part of the country; it was shot in September whilst quietly sitting on a tree overhanging a pool of water some ten miles from Potchefstroom by our ex-Landrost Mr. Andries Goetz, who kindly presented it to me in the flesh.

[The bird sent is marked as a female, and is apparently adult.—J. H. G.]

CERYLE MAXIMA, Pall. Great African Kingfisher.

This species becomes scarcer every year about Potchefstroom.

CHRYSOCOCCYX CUPREUS (Bodd.). Didric Cuckoo.

At the accustomed time last spring these Cuckoos appeared in more than their usual numbers, and there is little doubt that this species is fast increasing about here; they, however, disappeared this year (1885) much sooner than they usually do, and for the last three months, from January to the end of March, scarcely one, either old or young, was to be seen, and if by accident one was observed, it was silent and slunk away, making as little sign as possible.

Coccystes serratus (Sparrm.). Crested Black Cuckoo.

Female, shot 25th October.

This species is exceedingly scarce about Potchefstroom.

Pycnonotus layardi, Gurn. Layard's Bulbul.

Male and female, Rustenburg, 26th and 27th November, 1882.

Nest and eggs taken.

Acrocephalus bæticatus (Vieill.). Lesser South-African Reed-Warbler.

Shot amongst reeds near Potchefstroom, 14th September, 1884.

This, I believe, is about the time when the earliest of these migrants appear.

Stenostira scita (Vieill.). Fairy Flycatcher.

Male, Potchefstroom, 8th August.

This species is a very early visitor to the Transvaal, appearing about this time, which is the end of our winter and still very cold. These tiny birds are restless in the extreme, and I suppose they manage to keep themselves warm by constant motion.

Urolestes melanoleucus (Jard. & Selby). South-African Long-tailed Shrike.

This Shrike is not uncommon amongst the mimosa bush in some parts of the Potchefstroom district, but is more frequently found in the warmer bush-veldt districts.

Hyphanturgus olivaceus (Hahn). Olive-and-yellow Weaver-bird.

In the summer of 1884 these Weaver-birds were much more plentiful than usual in our neighbourhood; but this year they are unusually scarce, for which there is no apparent reason.

HYPHANTORNIS VELATUS (Vieill.). Black-veiled Weaver-bird.

In December 1882 I took a nest of this species from the twigs of a bush overhanging a stream at Sterkstroom, in the Rustenburg district. The eggs of this species are considerably smaller than those of *H. mariquensis*, but do not otherwise differ, and are equally variable in coloration, assuming various shades of verditer-speckled, pink-speckled, greenish speckled white, &c. The nest above mentioned contained two blue eggs.

PYROMELANA ORYX (Linn.). Larger Southern Red Bishop-bird.

PYROMELANA TAHA (Smith). Taha Bishop-bird.

The males of both these species are this year losing their breeding-plumage much earlier than usual; there is now (1st March, 1885) not a red specimen of the first to be seen, and the males of the second are rapidly losing their gaudy coats and assuming their brown winter dress. Both these species, and also *Chera progne*, are less numerous this year than usual.

371. VIDUA VERREAUXI, Cass. Verreaux's Widow-bird.

This handsome *Vidua* is becoming much more plentiful amongst the Magaliesbergen than it used to be years back. Then it was scarcely known in the Rustenburg district, where it is now by no means uncommon. This species assumes its nuptial plumage later in the season than most of the family, not being in full dress till the latter end of December, or even January, and on into February.

TRERON DELALANDII, Bon. Delalande's Pigeon.

I found a nest of this species amongst the Magaliesbergen towards the end of November 1882; the nest was composed of the usual layer of sticks and was not more than ten feet from the ground; it contained a well-fledged young bird and an addled white egg.

COLUMBA ARQUATRIX, Temm. Rameron Pigeon.

In the summer of 1882 these Pigeons appeared in considerable numbers amongst the ravines of the Magalies mountains, feeding on the sweet and large berries of a tree called by the Caffres "moople," which during that summer were very plentiful.

PTEROCLES GUTTURALIS, Smith. Yellow-throated Sand-Grouse.

This species is not at all uncommon near the village of Rustenburg; in certain bare spots, where these birds find the peculiar seeds they are partial to: from twenty to thirty in a flock may often be seen.

372. TURNIX LEPURANA, Smith. Kurrichane Hemipode.

This is a scarce species with us; it inhabits the open veldt, is solitary in its habits, and is seldom or never found on the corn-lands with the Common Quail.

Its length is given by Layard as 4½ inches, but it measures in the flesh as much as 6 inches.

CREX EGREGIA (Peters). Greater African Crake.

Female, Potchefstroom, 6th July, 1883. Iris and bare eyelid crimson; bill bluish ash, with the ridge dusky and the basal part rose-red; tarsi and feet dusky ash-brown.

This is an exceedingly scarce Rail in these parts; the specimen sent was killed with a long whip by a small boy, whilst running about on wheat-land, the blades of the wheat being then only a few inches high.

PORZANA BAILLONI (Vieill.). Baillon's Crake.

Male, immature in change, Potchefstroom, 18th July, 1883. Iris brownish red.

This Crake is obtained here occasionally.

373. PORPHYRIO ALLENI (Thomps.). Allen's Porphyrio.

Male, Rustenburg, 11th December, 1883, shot on the Hex river. Iris reddish brown; tarsi and feet crimson; bill dark red, frontal shield dusky.

This very scarce bird was sent to me by Mr. W. Lucas, who had it in the flesh and noted the particulars above transcribed.

FULICA CRISTATA, Gmel. Red-knobbed Coot.

The knob of the male bird during life is of the most lovely and brilliant crimson, and was particularly striking in one shot in April.

CURSORIUS RUFUS, Gould. Burchell's Courser.

I think this species has increased in numbers; it appears plentifully in June and July, breeding in August and September.

374. HIMANTOPUS CANDIDUS, Bonn. Black-winged Stilt.

Female, shot 28th July, 1883. Iris crimson; bill black; tarsi and feet bright rose-red; wings greenish black, with a metallic lustre; scapulars and tertials dusky brown; tail pale brownish grey; the rest of the plumage white, with a slight grey tinge on the head below and behind the eye, and some little mingling of a similar tinge (but very slight) on the back of the head and neck.

This specimen was shot by my brother on a marsh about nine miles from Potchefstroom; it was a solitary bird, and had been feeding on small freshwater snails, which formed the contents of the stomach.

The Stilt is one of our rarest visitors, and I never succeeded in shooting one, though occasionally, years ago, I used to see a couple on a swamp a few miles from Potchefstroom.

[In the present specimen the brown colouring of the scapulars and tertials, coupled with the worn appearance of that portion only of the plumage, affords, as it seems to me, a strong indication of immaturity, leading to the inference that the nearly pure white head and neck are not, as some ornithologists have supposed, exclusively characteristic of very old individuals.—J. H. G.]

GALLINAGO NIGRIPENNIS, Bon. Black-quilled Snipe.

While Snipe-shooting on 25th May, 1884, my pointer stood like a rock at something, and for some little time I could not make out what it was; but looking carefully amongst the grass I found a wee Snipe, not long hatched, a pretty little fellow with a bill about $\frac{3}{4}$ of an inch long, and rich dark brown downy plumage spotted with white. He stood fearlessly on my hand till I carefully put him back, and on moving some distance from the spot, I had the satisfaction of seeing the old bird quietly skim along and settle down by the youngster.

GALLINAGO MAJOR (Gmel.). Solitary Snipe.

Male, 8th March, 1883.
Male, 26th November, 1883.
Male, 5th December, 1883.

Numbers of these Snipes arrived in November 1883, but they were not so large and heavy as those obtained in March and April, the usual time for the appearance of this species; an occasional specimen may, however, be met with here at any time of the year.

MACHETES PUGNAX (Linn.). Ruff.

Female, Potchefstroom, 25th September, 1883.

This species occurs in gradually increasing numbers, appearing pretty regularly in September and remaining throughout our summer months; during the past summer (1884–85) it has been very plentiful, considerable flocks feeding on the cultivated lands, wheat, stubbles, &c.

TRINGA MINUTA, Leisl. Little Stint.

Potchefstroom, December 1883.

A few of these tiny Sandpipers occur in this neighbourhood.

[The specimen sent retains a few feathers of the nesting-plumage, but otherwise it is in winter garb.—J. H. G.]

TOTANUS GLAREOLA (Linn.). Wood-Sandpiper.

Female, Potchefstroom, 28th August, 1883.
Female, Potchefstroom, 8th December, 1883.

I fancy that this species is yearly becoming more common.

[Of the two specimens sent, that killed in August is in the breeding-dress, which the December bird has in great measure, though not entirely, lost.—J. H. G.]

TRINGOIDES HYPOLEUCUS (Linn.). Common Sandpiper.

Female, Potchefstroom, 15th August, 1883.

This is a scarce species here, but a solitary bird is occasionally seen.

375. **Nycticorax leuconotus**, Wagl. White-backed Night-Heron.

The specimen sent, which is the first I have met with, was one of a pair shot by Mr. Lucas on the river Hex, in the Rustenburg district. Mr. Lucas informs me that this pair of birds had a nest " composed of rushes on water," and containing five eggs; one of these, which Mr. Lucas sent to me, is white, with a faint tinge of green, and measures $1\frac{13}{16} \times 1\frac{7}{16}$ inch.

376. **Herodias alba** (Linn.). Great White Heron.

Female, Potchefstroom, September 1883. Total length in flesh 36 inches. Iris yellow; bill and skin round the eye yellow; tarsi and feet entirely black.

[I have taken the following additional measurements from this specimen, in which the decomposed feathers of the back are very slightly developed:—Bill from forehead 4·1 inches, do. from gape 5; wing 14·7, tarsus 5·7; middle toe *s. u.* 3·5. —J. H. G.]

Female, Potchefstroom, 19th January, 1884. With long back-plumes. Length in the flesh 38 inches, bill from gape $5\frac{1}{4}$ [from forehead 4·1.—J. H. G.], wing 15, tarsus 6. Iris pale yellow; bill chrome-yellow with black edges; bare skin at the base of the bill and about the eye greenish; shanks, legs, and feet black; decomposed tufts of feathers on the rump and breast creamy white.

This lovely Heron is generally scarce and difficult to get in our district.

[The above measurements may be compared with those of a specimen of *Herodias intermedia* given by Mr. Sharpe in 'The Ibis,' 1877, p. 349.—J. H. G.]

Plegadis falcinellus (Linn.). Glossy Ibis.

Male, nearly adult, Potchefstroom, 4th March, 1884. Iris umber-brown; bill ashy bottle-green; a narrow line of dingy white immediately before the feathers of the head just at the back of the eye; tarsi and feet pinkish ash-colour.

Female, nearly adult, Potchefstroom, 10th August, 1883.

The Glossy Ibis is always a scarce bird here.

[I have taken the following measurements from the above pair of birds, which show the difference in size between the sexes in this species:—

	Bill from forehead along the course of the culmen. in.	Wing. in.	Tarsus. in.	Middle toe *s. u.* in.
Male	5·4	11·3	3·8	2·7
Female	4·3	10·6	3·2	2·35

—J. H. G.]

Platalea tenuirostris, Temm. Slender-billed Spoonbill.

Female, shot on the Mooi river near Potchefstroom, 29th October, 1882.

This species, though seldom obtained, can hardly be called a scarce visitor to these parts during our winter months.

Casarca cana (Gmel.). South-African Shell-Duck.

This is always a very scarce species with us; it is more like a Goose than a Duck in its habits and appearance.

Podiceps cristatus (Linn.). Great Crested Grebe.

Male in full breeding-dress, shot 2nd September, 1883.

This Grebe is exceedingly scarce with us; the specimen sent was obtained by my brother on the river near Potchefstroom.

[I annex the measurements of this specimen, together with those of four other South-African examples: two of the latter have already been recorded in 'The Ibis,' 1869, p. 303, but I repeat them here for the sake of comparison; the other two have been kindly lent to me by Canon Tristram.

	Wing. in.	Tarsus. in.	Bill from forehead. in.
A. ♂, Transvaal (*vide* Ibis, 1869)	6·50	2·25	1 75
B. ♂, Transvaal (recorded above)	6·95	2·20	1·80
C. Transvaal (Canon Tristram's collection)	7·40	2·25	1·90
D. "South Africa" (do.) . .	7·10	2·20	1·85
E. ♀, Walvisch Bay (*vide* Ibis, 1869)	7·00	2·25	1·75

These measurements are, for the most part, somewhat less than those of four European examples with which I have compared them, and which I find to be as under:—

	Wing. in.	Tarsus. in.	Bill from forehead. in.
♂, Norfolk	7·25	2·75	2·00
♀, Do.	7·45	2·25	1·75
Do.	7·70	2·35	1·90
Leadenhall Market.	7·90	2·40	2 00

I think it also worthy of remark that the three South-African specimens which I have marked as B, C, and D, though in full breeding-dress, show no trace of the white line immediately above the eye, which is usual in British specimens when in full plumage, and which has only been absent in one such example that I have examined, a Norfolk specimen killed in August, when the nuptial dress was no longer at its fullest.

Unfortunately, the two South-African skins which I referred to in 'The Ibis' for 1869 are not now in my possession, and I am unable to say whether the white superciliary line was absent in them also.—J. H. G.]

Podiceps minor (Linn.). Little Grebe.

Male, Potchefstroom, 12th August, 1883. In very nearly full breeding-dress.

This species, though by no means numerous in the Transvaal, breeds there in suitable localities, but shows itself more in winter than in summer.

[I have examined two skins of this species from Natal and two from Transvaal, all of which exhibit a slightly greater amount of white on the secondaries than is usual in British specimens, but less than I have found on the secondaries of an Indian example which I have also examined.—J. H. G.]

XXXV.—*On the Birds of the Upper Tarim, Kashgaria.*

By M. Menzbier.

Since my return from Western Europe I have been favoured with an inspection of a small but interesting collection of birds formed in the district of the Upper Tarim river, in Kashgaria, presented by Messrs. Majev and Wilkins to the University of Moscow. As I believe some of the species represented therein to be of very great importance, I take this opportunity of bringing a list of the birds before the notice of ornithologists.

The district of the Upper Tarim was previously quite unknown from an ornithological point of view. The Lower Tarim was explored by Col. Prjevalsky. The desert southward from Kashgar and Kashgar-Darja has been visited by the English expeditions, and the fauna of the vast mountain-system of the Tian-shan was studied by the late Mr. Severtzov; but no ornithologist had visited the country of the Taushkan-Darja before the above-mentioned expedition of Messrs. Majev and Wilkins. All the specimens mentioned in our list were obtained by the last-named gentlemen along the route from Kyzil-bulak (southwards from the Muzart gorge, lat. 41° 45′ and long. 80° 50′), to Ulugchat (lat. 39° 45′ and long. 74° 20′), and on the river Uïtal, during the months of September, October, and November. The average height of this north-western border of the tablelands of Central Asia is from 3000 to 6000 feet above the sea-level. Along the southern slopes of the Koushaal-tan there is no sharp limit between the tableland and the mountain-country. Southwards from the Taushkan-Darja, as far as the middle of the route between Kujuk-tokai and Kashgar, the plateau reaches more than 6000 feet. But we find throughout the whole of the Upper Tarim the uniform character of the tableland of Central Asia, and, as our list shows, we have in it only a part of the Central-Asian ornithological district.

I now proceed to notice the species represented in the collection:—

1. Podoces hendersoni.

A beautiful specimen of this remarkable bird was shot at Kyzil-bulak (5335 feet), on the 12th of November.

2. Cyanistes cyanus tian-schanicus.

This bird was found at Kyzil-kumbez in the beginning of November.

3. Leptopœcile sophiæ major, subsp. nov.

L. sophiæ similis, sed major, ala obtusiore, colore cæruleo nec ultramarino prædominante.

Some specimens of this pretty bird were obtained by the expedition on the Taushkan-Darja about Ush-turfan in the beginning of October, and on the river Koushaal at the end of that month. I think that it is the same desert race of *Leptopœcile* that was found by Col. Prjevalsky on the Lower Tarim and was recorded by him as *Leptopœcile sophiæ*.

4. Sturnus purpurascens.

This species was obtained in the neighbourhood of Kara-zhodja at the end of September and near Kyzil-kumbez in the beginning of November.

5. Carpodacus rhodochlamys.

The conspicuous Rose-mantled Grosbeak was found at Ush-turfan on the 19th of October, and along the Uïtal on the 20th of the same month.

6. Carpodacus rubicilla.

A male of this species was shot at Kyzil-kumbez on the 2nd of November.

7. Erythrospiza obsoleta.

This pretty bird was found by the expedition near the Taushkan-Darja at Ush-turfan.

8. Bucanetes mongolicus.

Some specimens of this bird were obtained by Mr. Majev at Kyzil-bulak and at Egin, along the confines of the desert.

9. Pyrgita petronia.

Several specimens of this bird were obtained near Ush-turfan at the end of September and at Jaman-su about the middle of October.

10. Pyrgitopsis ammodendri.

This species was obtained near the Taushkan-Darja at Ush-turfan as well as more to the west, at Djigda and at Djai-tübe.

11. Emberiza cioides.

This bird was obtained on the Beliauty at 11,350 feet, in the beginning of November.

12. Alaudula leucophæa.

Several specimens of this species were obtained in the neighbourhood of Kara-khodja and near Jaman-su at the end of September and in the beginning of October.

13. Otocorys albigula.

The Eastern Shore-Lark was obtained by the expedition near Kyzil-bulak on the 11th of September and near Kulan-saryk on the 22nd of October.

14. Galerita magna.

This Crested Lark was found near Kara-khodja and along the river Uïtal at the end of September.

15. Anthus spinoletta.

Some specimens of the Water-Pipit were obtained about Ush-turfan on the 27th of September and near Janji-shar on the 22nd of November.

16. Atraphornis aralensis.

A male of this species was shot on the 23rd of October near Kulan-saryk.

17. Rhopophilus deserti.

1876. *Rhopophilus pekinensis, β.* var. *major,* Prjev. 'Mongolia, the Tangut Country' (in Russ.), p. 32.

1878. *Rhopophilus deserti,* Prjev. 'Expedition to Lob-nor' (in Russ.), p. 23; Ibis, 1878, p. 375.

R. pekinensi similis, sed major et pallidior.

Dimensions. ♂: length 200–201 millim., expanse 205–225, tail 98–105, wing 69–72, bill 15–16·5, tarsus 24–25. ♀: length 190–201 millim., expanse 200–210, tail 93–95, wing 68, bill 14–15, tarsus 22–25.

Description. Legs and feet flesh-coloured; bill brown; lower mandible fleshy, except at the tip; iris dark brown.

Plumage. Above pale brown (the desert colour); under surface of the body white. The top and back of the head, back of the neck, back and scapulars pale slightly greyish brown, each feather with a narrow dark-brown central shaft-stripe; on the back of the neck the shaft-stripes are only slightly pronounced. The rump pale brown, without any central dark streaks on the feathers. A long delicate grey superciliary stripe from the nostrils over the lores, eyes, and ear-coverts. A faint dusky streak through the lores to the eyes and ear-coverts. Cheeks and ear-coverts brownish. A dark-brown moustachial stripe from the gape under the cheeks and ear-coverts. Flanks of the neck greyish, each feather with reddish-brown shaft-stripe. Coverts and quills pale brown, with more darkly coloured primaries, and with a tinge of grey on coverts. Chin, throat, breast, and abdomen white, tinged on the flanks and tibial feathers with rufous buff, each feather on the sides of the breast and of the flanks with a narrow reddish-brown shaft-stripe. Lower wing-coverts, axillaries, and under tail-coverts pale rufous buff or buffy white. Tail brown; two middle tail-feathers brown, more darkly coloured along the shafts, and with numerous narrow close-set obsolete bars only visible in certain lights; the other tail-feathers dark brown, with paler tips and outer webs margined throughout their length with pale brown; the two exterior feathers tipped and broadly margined on the outer webs with whitish or white.

Through the kindness of Mr. Strauch, Director of the Zoological Museum in the Academy of Sciences, and of Mr. Büchner, Ornithological Curator of the same institute, I have received for comparison three specimens of *Rhopophilus* obtained by Col. Prjevalsky during his first journey through Mongolia: two *R. pekinensis*, *β.* var. *major* (=*R. deserti*), from Zaidam, and a male of *R. pekinensis* from Northern China. After a careful examination of all these specimens, and after a comparison of *R. deserti* with *R. pekinensis* and *R. albo-superciliaris* (‘Lahore to Yarkand,’ p. 218, pl. xviii.), I am convinced that *R. deserti* is a species intermediate between the eastern *R. pekinensis* and the south-western *R. albo-superciliaris**.

Specimens of this bird were obtained by Mr. Majev in the bushes along the Taushkan-Darja, at Ush-turfan, and Jaman-su in the middle of October.

18. Accentor fulvescens.

Some specimens of this comparatively rare bird were obtained on the 20th of October near the Upper Uïtal.

19. Accentor atrogularis.

A male of this bird was obtained on the 20th of October near the Upper Uïtal.

20. Ruticilla erythrogastra.

Numbers of Güldenstädt's Redstart were met with on the Taushkan-Darja near Ush-turfan in the beginning of October.

21. Saxicola salina.

This Chat was obtained on the 22nd of October near Kulan-saryk.

22. Turdus mystacinus.

This species was found near Kashgar-tokai on the 30th of October and near Kyzil-kumbez on the 1st of December.

23. Merula maxima.

The Great Blackbird was obtained in the same localities as *T. mystacinus*.

24. Lanius mollis.

A very old female of this most remarkable bird was obtained by Mr. Wilkins near Ulugchat on the 12th of October.

---

* [With all due respect for our worthy correspondent's opinion, we must assert that, after careful comparison of his two examples of *R. deserti*, Prjevalsky, with the type specimen of *R. superciliaris* (Hume), in the British Museum, we have no doubt, nor has Mr. Seebohm, who has also examined them, as to their specific identity. If our view prove correct, then Hume's name has priority of several years.—Edd.]

25. **Lanius homeyeri.**

Two examples of this species were obtained by the expedition: a female in intermediate plumage near Ush-turfan on the 16th of October, and a young one near Djigda on the 9th of November.

26. **Lanius isabellinus.**

The Desert-Shrike was observed by the expedition near Aksu on the 20th of September and near Jaman-su in the beginning of October.

27. **Upupa epops.**

A female of the Hoopoe was obtained near Jangishar on the 22nd of November.

28. **Tichodroma muraria.**

We have an example of the Wall-creeper from Ush-turfan, obtained on the 26th September.

29. **Picus leptorhynchus.**

A female of this species was shot on the 19th of September near Aksu.

30. **Cuculus canorus.**

A specimen of the Cuckoo was obtained on the 24th of September near Kara-khodja.

31. **Streptopelia torquata.**

Mr. Majev has sent us some skins of this pretty bird from Aksu, as well as from the neighbourhood of Kashgar.

32. **Pterocles arenarius.**

Two specimens of this Black-bellied Sand-Grouse, a male and a female, were obtained about Kulan-saryk on the 23rd of October.

33. **Totanus calidris.**

The Redshank was found on the Kashgar-Darja on the 27th of November.

34. **Anas strepera.**

The Gadwall was obtained near Kashgar-tokai at the end of October.

35. ANAS PENELOPE.

The Wigeon was obtained near Kashgar-tokai on the 30th of October.

36. QUERQUEDULA CIRCIA.

At the end of October the Garganey was found near Kashgar-tokai.

37. QUERQUEDULA CRECCA.

A single specimen of the Teal was received from the neighbourhood of Kashgar-tokai.

38. FULIGULA NYROCA.

The White-eyed Duck was obtained near Aksu on the 20th September, and at Kashgar-tokai on the 20th October.

39. CLANGULA GLAUCION.

The Golden-eye was found on the Upper Kashgar-Darja in the beginning of December.

40. PODICEPS MINOR.

An example of the Little Grebe was obtained near Kashgar-tokai.

XXXVI.—*Further Notes on the Ornithology of St. Kilda.*

By CHARLES DIXON.

THE following additional information on the ornithology of St. Kilda forms a supplement to my paper on the subject (Ibis, 1885, p. 69). Unfortunately, I was not able to visit the grand bird-bazaar myself this season, as I had intended; but the subjoined notes have been furnished to me by my friend Mr. John Mackenzie, Jun., who spent his usual fortnight there between the 1st and 14th of June. This gentleman has also supplied me with a fine series of the St. Kilda Wren and also with the nest and eggs of this new British species. The birds were very late in laying this season, especially the Guillemots, owing probably to the bad weather and the exceptionally backward spring.

ACCIPITER NISUS.

The Sparrow-Hawk must now be added to the list of St. Kilda birds. Mr. Mackenzie observed on the 7th of June an example several times on Mullach-Scall, the large shoulder which bounds Village Bay on the south-west, opposite to the island of Doon. It may breed there.

TROGLODYTES HIRTENSIS.

I am sorry to hear that the St. Kilda Wrens "are not nearly so numerous as last year." Mr. Mackenzie found two nests built in the "cleats" (stone hovels in which the sheep take refuge during rough weather and where the St.-Kildans dry their hay), each containing six much incubated eggs, so that this number is probably the full clutch. One of the nests and five of the eggs are now before me. The eggs, when blown, are pure white in ground-colour, boldly spotted and minutely freckled with brownish red, and with a few indistinct paler underlying markings which in some cases approach violet-grey. The spots are most numerous on the large end of the egg, where they form an irregular zone, but on one specimen they are more evenly distributed over the entire surface. These eggs very closely resemble typical eggs of the Great Titmouse (*Parus major*); but others are pure white, without spots of any kind, these characters running through an entire clutch. In shape also they resemble those of the Great Titmouse, but others seen by Mr. Mackenzie were almost as much pointed at one end as at the other. The eggs that I have received vary in length from ·72 to ·69 inch, and in breadth from ·58 to ·55 inch. The nest accompanying them is a very beautiful structure, and was built in a crevice of one of the "cleats." It closely resembles that of the Common Wren, but appears to be a trifle more open and not so globular. The outside is almost exclusively made of moss, with here and there a scrap of dried grass, the inside being lined abundantly with feathers, especially those of the Starling, Crow, and Gull. An interesting feature in the materials of this nest deserving of notice is the abundance of hair in the lining. No horses are kept on the islands, and long cowhairs (from the tail) are used; also a few long horsehairs, which can only be obtained from the hundreds of Puffin-snares which are set in all parts of the islands. The nest measures about 19 inches in circumference, 2½ inches in depth, and the entrance-hole about 2 inches in diameter. I should also add that the female resembles the male in colour, but is a little smaller in size.

Mr. Mackenzie has sent me the following note on this bird:—"The habits of the St. Kilda Wren differ considerably from those of the Common Wren. Its song is much louder and harsher, and does not possess so many notes. Its favourite places for singing are on the tops of the 'cleats' and on the highest stones of the dykes or walls. It is particularly fond of nesting in the roof of a 'cleat' or in the centre of a cairn. I noticed three pairs of this bird on Doon." It is to be hoped that Macleod of Macleod, the present proprietor of St. Kilda, will endeavour to protect this interesting little bird and prevent its extinction by prohibiting the wholesale collection of specimens, either by the natives themselves or by the tourists that visit the islands in the summer months, when the birds are engaged in rearing their young*.

CORVUS CORAX.

When I was at St. Kilda last year the Raven was rare; this year Mr. Mackenzie informs me that it is very abundant, but the Hooded Crows are much scarcer. He counted seven pairs of Ravens within a hundred and fifty yards of the back of the school-house.

HIRUNDO RUSTICA.

Last year I did not observe the Swallow during my stay, but this season, I am informed, it was very common. One was shot for identification on the 6th of June. Mr. Mackenzie was of opinion that they were breeding in the rocks at the back of the "stone houses," as he saw them entering the holes and remaining there for some time. My statement that it never breeds on St. Kilda will perhaps have to be modified.

---

* [We are not aware that any specimens of this species have been obtained by other collectors than Messrs. Dixon and Mackenzie.—EDD.]

ARDEA CINEREA.

A Heron visited the island of St. Kilda last winter, but soon died from want of food.

CREX PRATENSIS.

The Corn-Crake was very common in the islands last autumn on migration; Mr. Campbell obtained an example. The St. Kilda name for this bird is "Trien."

CYGNUS, sp.?

Two Swans visited the island last winter, and one of them died for want of food; but unfortunately its skin was not preserved, so that the species is still undetermined.

COLYMBUS GLACIALIS.

Mr. Mackenzie informs me that he shot an immature example of this species. He says that there were several swimming along with the Eiders in the bay; but that, owing to the heavy sea, he was unable to recover his prize until it had been so mutilated by the Great Black-backed Gulls as to be worthless for preserving.

FRATERCULA ARCTICA.

Mr. Mackenzie writes:—"The natives told me a very curious thing about the Puffin. They said that these birds never breed except on the weather sides of the islands."

PUFFINUS ANGLORUM.

Mr. Mackenzie was informed that the Manx Shearwater is in the habit of diving and taking the baits off the long lines, in a similar manner to the Fulmar, as already mentioned in my former paper.

THALASSIDROMA LEUCORRHOA.

Mr. Mackenzie obtained two nests of the Fork-tailed Petrel on the island of Doon; but he was too early for the regular breeding-season, which generally commences about the second week in June.

I have heard nothing more of the King Eiders; but I can name no part of the British Islands which will more amply repay a careful investigation of its bird-riches than St. Kilda. The place must be seen to be thoroughly appreciated; and I have little doubt that other discoveries await the ornithologist in this lonely group of Atlantic isles. Much remains to be done amongst the Fulmars; and the Shearwaters that breed there are, I think, very imperfectly known. Will not some member of the B. O. U. take a peep at this wonderful bird-paradise and tell us more about the ornithology of this remote corner of the British Islands? believe me, he will be well repaid!

XXXVII.—*Note on* Baza ceylonensis, *Legge.* By SAMUEL BLIGH, Catton, Koslander, Ceylon. Communicated by J. H. GURNEY.

THE first specimen of *Baza ceylonensis* which I have had in the flesh was shot by a coolie on the top of a precipice above here and over 5000 feet high, on the 27th of March, 1885.

It was a male, with the testes very large, and its stomach contained the remains of a large lizard, the long tail of which had been swallowed whole. This specimen weighed just over one pound; its length was 17 inches, wing-measurement $11\frac{1}{4}$, spread of wings 38, tail $8\frac{1}{4}$, longest crest-feather $2\frac{3}{8}$, tarsus $1\frac{1}{2}$, naked part of tarsus in front $\frac{3}{4}$, from point of closed wings to end of tail 2. The legs, in a fresh state, were not yellow, as described by Col. Legge ('Birds of Ceylon,' p. 94), but dull dirty white, pervaded by a visible, though faint, stain of plumbeous; the cere and the base of the bill were perfectly of one colour, and might be called black, though, perhaps, with a tinge of brown, the base of the lower mandible and the lower base of the upper being lead-coloured, as were also the bare skin of the lores and that above the eyes; the irides were orange.

I found on skinning this specimen that the eye was unusually large for the size of the bird; not that the visible part of the eye was so, but the ball and horny sheath, these being also of an ovoid shape, so that it required no measurement to see that the length of the eye considerably exceeded its height.

XXXVIII.—*Further Contributions to the Ornithology of Japan.*
By HENRY SEEBOHM.

AMONGST a small number of birds which have been sent to me for examination by the Government of Japan, through Mr. H. Pryer, are several deserving of notice.

DIOMEDEA NIGRIPES.

This Albatross was first recorded from Japan a year ago (Ibis, 1884, p. 176), a female having been shot on the 17th of May. I have now to record a second example obtained on the coast of the province of Sagami, near Yokohama. It is a male, the label being dated the 27th of February.

NUMENIUS MINOR.

The sole record of the occurrence of this little Curlew in Japan has hitherto been that of the 'Fauna Japonica' of Temminck and Schlegel, and this is now confirmed by a female example obtained at Giotoku, near Yokohama, on the 3rd of October, 1883. This species may be regarded as the Asiatic representative of the Eskimo Curlew: breeding in Eastern Siberia, passing along the coasts of China and Japan on the spring and autumn migration, and wintering in Australia.

TOTANUS CALIDRIS.

A young male Redshank, in first plumage, obtained on the 4th of September, 1883, at Giotoku, not very far from Yokohama, adds a new bird to the Japanese list. It is remarkable that a bird breeding almost throughout the Palæarctic Region and wintering in Africa, India, Burma, and the islands of the Malay archipelago, should not have been found long ago on migration in Japan.

Totanus pugnax.

The distribution of the Ruff is somewhat similar to that of the Redshank, but hitherto, so far as I know, only one example has been said to have occurred in Japan, viz. at Hakodadi (Ibis, 1884, p. 33). I have now to record two more examples from the neighbourhood of Yokohama, a male in winter plumage and a male in first plumage, obtained on the 13th of October.

Alca troile arra.

A series of Pallas's Guillemot from Japan and the Kurile Islands appears to justify me in the conclusion that this is an intermediate form between the Common Guillemot and Brünnich's Guillemot. An almost complete series of forms intermediate in the length and thickness of the bill and the conspicuousness of the pale base of the upper mandible may be said nearly to bridge over the distance from one to the other, so that these Guillemots can scarcely be regarded as more than subspecifically distinct.

XXXIX.—*An Autumn Ramble in Eastern Iceland, with some Notes from the Faröes.* By Wm. Eagle Clarke, F.L.S., and James Backhouse, Jun.

(Plate IX.)

The morning of the 2nd of September, 1884, found us on board the Danish Royal Mail Boat 'Thyra,' steaming down the Forth *en route* for Iceland, *viâ* the Faröe Islands. At about 11 a.m. on the 3rd we sighted the Orkneys, and these passed, a north-westerly course was shaped, carrying us south of the Shetlands, of which group only Fair Island and Foula were seen from afar. The Faröes should have been in sight early on the morning of the 4th, but the islands were shrouded in drizzling mist, a characteristic feature in the climate of the group. Numerous Fulmars sailing round the vessel heralded our approach, and in due course the bold outline of Suderöe loomed through the veil of mist, while to the eastward the cone-capped Dimons appeared, illumined by a stray sun-ray. At 11 A.M. the anchor was dropped off the settlement of Tveraa, and we took an opportunity of going ashore in search of birds. The Rock-Pipit was very abundant, being often in parties of from six to a dozen birds, and soon a speciality was seen in the shape of the Faroese Wren (*Troglodytes borealis*), and an exciting pursuit of the tiny bird, as it flitted among the rocks at the water's edge, or crept like a mouse under and about them, resulted in its falling to a lucky snap-shot. The Grey Crow was very numerous and tame; here, no doubt, he is at least useful as a scavenger, devouring the garbage cast out by the fishermen. Several White Wagtails were seen and one obtained; the other species noted were the Raven, Meadow-Pipit, Merlin, Whimbrel, Oyster-catcher, Ringed Plover, the Dunlin, and several common sea-fowl. Another Wren was seen, and might have been secured, but since it haunted the simple family graveyard adjoining a detached cottage, the peacefulness of the scene was not disturbed by an explosion of gunpowder. On our return to the boat we observed at close quarters a Garden-Warbler (*Sylvia hortensis*) seeking food on some low herbage adjoining the houses; and this is interesting, as it is, we believe, the first record of its occurrence in the Faröes.

Early on the 5th we arrived at Thorshaven. Here we were informed that shooting was not allowed, owing to an alarming decrease in the number of birds; and it was only after an annoying delay that a generous landowner granted permission to shoot over his estate on the hills behind the town. Birds were in fewer numbers here, and during a long round we only saw Oyster-catchers on the hills and a sprinkling of Rock- and Meadow-Pipits and Grey Crows on the lower ground. Another Garden-Warbler was watched as it fed on the red currants in a small storm-swept garden. We also paid a pleasant visit to Herr Müller, the ornithologist and man of many offices. In the afternoon we left Strömöe, and our next place of call was Klaksvig, where we went ashore.

After experiencing some very heavy weather, the glistening snow-capped mountains of Eastern Iceland were sighted on the 9th, and we entered Seyðisfjörðr early in the evening. It is a narrow picturesque inlet of the sea, and perhaps the most important one on the east coast. Its northern promontory, rising almost perpendicularly from the ocean, is the resort of myriads of sea-fowl in the summer, but now only a few Puffins and a small flock of Eiders were seen. After steaming for some miles in sheltered waters, we dropped anchor at dusk within a few yards of the strand at the head of the fjörðr. Next morning we took up our quarters at the "Hotel Island," probably one of the most primitive inns in the world, where guests and host and hostess all sup in company. A stroll on the margin of the fjörðr was disappointing, ornithologically, for we only observed a family party of White Wagtails and a solitary Wheatear; and several hours of careful investigation in the valley at the head of the fjörðr only added Meadow-Pipits and a pair of Ravens to our list. Another ramble on the shores of the fjörðr in the afternoon resulted in our seeing another pair of Ravens and a few Great Black-backed Gulls. This extreme poverty of bird-life at the coast made us anxious to proceed inland with all possible speed; so the following day (the 11th) found us busy making arrangements for the journey, such as hiring ponies for riding and baggage purposes. We left Seyðisfjörðr about midday on the 12th, riding in company with a party of some seventeen Icelanders across the mountains (2500 feet) in a westerly direction. The ascent was steep, rough, and in many places dangerous, and we soon experienced the wonderful adroitness and surefootedness of the ponies. The "col" reached, we crossed several swamps and large beds of snow, and skirted the margins of some likely-looking tarns; but here, there, and everywhere around us was an appalling solitude, the silence of which was only broken by the hoarse croak of a Raven. The great valley of the Lagarfljot—Iceland's longest lake, forty-five miles in length—into which we descended in the evening light, presented a most weird aspect, the marshy shores of the dark lake being intersected or dotted by numerous silvery streams or pools, while the entire absence of woodland, and consequently apparent barrenness of its surroundings, added much to an impressive scene. Here we had our first peep at the great Snæfell (6000 feet), forty miles away to the west beyond the lake. Long after dark, wet from fording rivers, ravenously hungry, sore and stiff, we arrived at the house of the hospitable clergyman at Vallaness, who, in spite of the lateness of the hour, set before us his choicest smoked, but raw, mutton and salmon, with flat-bread and milk—fare not to be despised after ten hours in the saddle in such an appetizing air.

During an early stroll on the 14th along the shores of the lake, whose waters, mainly derived from the northern slopes of that vast glacier, the Vatna Jökull, are of a thick milky-white hue, not a bird was to be found. Our route lay along the lake-side, and midday found us approaching the birch-clad slopes of Hallormstaðr, a place of much promise, since trees are only to be found in one other locality in the island, the scrub-clad valley of the Fnjoska. These trees, which are entirely birch, were, as a rule, only of stunted growth, but here and there a monarch of Icelandic forest-growth raised its head, crowned with graceful golden foliage, to the proud height of twenty feet! Such a favoured locality was not to be passed by, so arrangements were made to remain the night under the hospitable roof of the neighbouring farm-house. The afternoon was devoted to an examination of the birch-covered hill-side, intersected by several ravines coursed by mountain-torrents, while here and there a rocky escarpment or a craggy shoulder added to its ruggedness. The birches, as a rule, were little more than brush-wood, and, along with an abundant carpet of bilberry, crowberry, and *Dryas octopetala*, formed an excellent cover. Meadow-Pipits were fairly abundant, and a Merlin was several times observed beating over the hill; a Wheatear was also noted, and several Ravens flying high overhead. Ornithologically we had as yet done nothing, but the next bird brought to bag went far towards making up for past disappointments, for in it we obtained the chief object of our visit to Iceland at this season, namely, the Rock-Ptarmigan (*Lagopus rupestris*) in autumn plumage, in which stage it was previously unknown to ornithologists.

It may be well here to make a few observations on the habits of this species in this locality, where we had many opportunities for observing it during our stay in Iceland. The Rock-Ptarmigan was found to be abundant on the hill-slopes as far as the birch-growth extended, which, so far as elevation is concerned, would be about 600 feet. At first, family parties, consisting of old birds in dark mantles, accompanied by six or eight young, in size their equals, but in their upper plumage of a much lighter hue, were commonly met with. After being shot at a few times these family gatherings were broken up, and single birds, or now and then two or three together, were to be found scattered all over the birch-cover. At first they were wonderfully tame, allowing a close approach, but they soon became initiated to the terrors of the gun. Before taking flight they were occasionally observed to indulge in dropping a curious series of curtsies, reminding one of the movements of the domesticated Muscovy Duck. On rising they were silent, and no note or call was heard, except the guttural croak with which the old cocks announced approaching danger and their own proximity. They were mostly to be found abroad feeding during the early morning and evening, and their favourite haunts were little grassy dells fringed with bilberry or *Dryas octopetala* and surrounded by birches. Some, perhaps all, have the habit of resting, with puffed-out feathers, on the lower branches of the bushes; but as they were only observed in such positions in the early morning, it may be a customary roosting-place. The food of all shot at Hallormstaðr consisted entirely of the fruit of the bilberry, with which their crops were greatly distended. Considering the richness of this diet, it is hardly necessary to remark that their flesh was delicious, and their bodies, when skinned and cooked, formed a most acceptable change from the perpetual mutton of the Icelandic bill of fare. In winter, as we were informed by our estimable friend Pastor Sigurdar Gunnarsson, the chief food of the species consists of the leaves of *Dryas octopetala*, called, on this account, in the Icelandic vernacular, "Rjūpa-læf;" "Rjūpa" being the native name for the Rock-Ptarmigan.

This bird seems to be decidedly local in the island; indeed our brother M. B. O. U., the Rev. E. Ponsonby Knubley, who spent three months in Western Iceland, did not meet with it. The species is still numerous in several northern districts, although its numbers were sadly diminished by the long and severe winter of 1880-81, when in some places it was exterminated, and in most brought to the verge of extinction. At Hallormstaðr thousands perished, and many starving birds approached the house and, losing all fear, entered the building where the hay was stowed, to feed, in the presence of the proprietor and his servants, on the seeds scattered on the floor.

In winter the Rock-Ptarmigans are captured by means of rude string nooses set in the snow, and around which hay-seeds are scattered. In this way enormous numbers were formerly taken and sent to Denmark; and we should be afraid to say how many thousand brace the captain of the mail-steamer informed us he had taken on a single voyage in years gone by; now he seldom sees any. In many places, however, it is gratifying to know that at other seasons the birds enjoy immunity from persecution; for the Icelander lacks even a dash of the sportsman in his nature.

The morning of the 14th found us again in the saddle continuing our journey towards the head of the Lagarfljot valley. At noon we had reached the head-waters of the lake, and crossing the numerous channels of the affluent river, we proceeded to Valthjofstaðr, situated at the point where the valley bifurcates, and on the western branch of the river which rises on the north-eastern slopes of the Vatna Jökull. At the invitation of our congenial travelling companions, Pastor Gunnarsson and his good wife, we decided to make this place our headquarters, in order to explore the immediate neighbourhood from this point. As we approached Valthjofstaðr a migratory party of Golden Plover passed overhead, flying S.E. The morning of the 15th was devoted to an inspection of the marshy land adjoining the river, and extending for some four miles towards the lake. On the numerous sedgy pools Mallard were abundant, but difficult to approach owing to the entire absence of cover; consequently we only managed to bag a couple. Before these could be retrieved or the gun recharged, a bold little Merlin endeavoured to carry one of them off under our very noses. The Golden Plover were now evidently leaving the islands, several parties passing over in a south-westerly direction. The only other birds seen were Meadow-Pipits, a few of which were scattered over the pasture-lands of the valley. Next day we observed a solitary Wheatear about the church, the last of the species seen by us in Iceland. Having decided to visit the mountain-lakes, which, we were informed, existed to the west, we ascended the escarpment behind Valthjofstaðr, a southern portion of the chain of mountains forming the western flank of the Lagarfljot valley, named on the maps the Fljotsdals heiði. After a tough climb of 2500 feet to the summit of one of the many peaks, a sublime panorama lay before us. Away a few miles to the south-west was the noble Snaefell, the grandest and second highest mountain in Iceland (6000 feet), with the summit and sides for 3000 feet clothed in perpetual snow. Behind, and trending away far to the south and west, but to all appearances quite close, were the hundred sunlit shoulders of Vatna Jökull, the largest glacier in Europe, covering an area of 3000 square miles. North, west, and east the scene was similar to that to the south, all round, except in the immediate foreground, being a series of snowy mountain-peaks, seen to perfection under a cloudless sky. In the western foreground were numerous silvery tarns embosomed in broken hummocky ground, here and there scantily clothed with crowberry, *Dryas octopetala*, and little tufts of *Silene acaulis* and the large yellow *Saxifraga hirculus*. The few Ducks on the nearest of these lakes had noted our approach, and floated in the middle, well out of reach. On the next and smaller lakelet a couple of Ducks gave us practical illustration of their diving-powers. The sheet of water was not more than eighty yards in diameter, and considering we were on different sides of it, the birds should have been well within reasonable range, even if they had strictly kept to the middle, which they did not. However, a serious expenditure of No. 4 resulted in *nil*; for the birds dived at the flash, our only consolation being to observe the shot sweep over the spot which a fraction of a second before was occupied by the bird or birds. They seemed to have no desire to take flight; and an examination of the water proving it to be only some two feet deep, with a firm bottom of granulated pumice (erupted from Askja in 1875), we resolved to try wading to closer quarters, with the result that the first shot turned one of them over. It proved to be a young Long-tailed Duck (*Harelda glacialis*), with nestling down still adhering in places. The remaining bird was not so easily brought to bag; although fired at more than once at not more than fifteen yards, it disappeared like magic, but must have received some of the shot. At last it was obtained by firing the moment the surface of the water showed signs of breaking on its reappearance after a dive, and proved to be a very old female of the same species. Why this bird, in the full possession of her primary feathers, did not resort to her wings as a possible means of escape must remain a puzzle. A little later we had another illustration of the early development of this faculty of diving. A solitary Long-tailed Duck was surprised on a small pool and dived instantly, but too late; for it came to the surface mortally wounded, and when picked up proved to be little more than a mere nestling, its upper plumes being a mass of down, while its wing-quills were sprouting from the pen, and only some two inches long. This was an interesting specimen, inasmuch as it afforded evidence of the late breeding of the species. Duck were to be seen on most of the tarns, some of them taking flight on our approach, while others kept well out of range. On the largest lake we managed to secure, in a little bay, four young but full-grown Long-tailed Ducks, none of which offered to rise, but trusted to diving as a means of escape. Here, too, were a pair of Whoopers (*Cygnus musicus*), which, we were informed, had annually nested on a rocky islet safe from intrusion. These birds, disturbed by the firing, flew trumpeting within easy range; but to have shot them would have been wanton, for there were no means of obtaining them from the ice-cold water. There were no cygnets on the lake. Had they already departed for the south without parental guidance, or had they fallen victims to the prowling Arctic foxes, with which the neighbourhood abounded? A pair of Great Northern Divers floated and dived in the middle waters, and of these we had to be content with a binocular examination. The only other birds seen during the day were Ravens, and in the valley near to headquarters a flock of Golden Plover feeding on a stony patch by the river-side.

A beat over the birch-cover at Hallormstaðr, ten miles distant, resulted in a bag of ten Ptarmigan and a few Meadow-Pipits. The Merlin and Raven were again observed, and also a small flight of Redpolls (*Linota linaria* ?), passing over in a southerly direction, their note much resembling that of *L. rufescens*. The early morning of the 19th added ten more "Rjūpa" to our score, and we might have shot almost any number; but we had already obtained as many as we could well spare time to skin, and we did not further molest them. Six Ravens, a pair of Golden Plovers, another migratory flock of Redpolls, and a solitary Redwing among the birches completed our list of birds for the day. We were afterwards rather surprised not to have met with the Redwing in some numbers, for friends of ours shooting about this date in Northern Iceland found them commonly in the birch-cover in the Fnjoska Dalr, and the species has, indeed, but little choice of breeding-stations in the island.

The exceptionally fine weather which had hitherto been so much in our favour changed during the early hours of the 20th, and heavy rain prevailed during the whole of that day, followed, on the 21st, by a severe gale. At midday, however, the rain, at least, ceased, and a large party of us visited the celebrated waterfall Hengi-foss, or Hanging Fall, situated on the west side of the Lagarfljot, almost opposite to Hallormstaðr. On the 22nd the weather took a turn for the worse, and the advent of winter proclaimed itself; for snow fell unceasingly during the day, reminding us, as well as our feathered friends, that we must soon turn our faces southwards; and the accompanying fall in the temperature uncomfortably manifested itself in our stoveless room. The 23rd being fine but cold, we decided, in spite of the snow now entirely clothing the mountains, to visit again the tarns of the Fljotsdals heiði. The climb proved a laborious one, the snow lying, as a rule, fifteen inches deep; but in places drifts of several feet in depth had to be crossed. The snow-hidden streams, however, proved most annoying, a step into one of them resulting in a tumble. The first birds seen were a party of Snow-Buntings, twittering cheerily and evidently seeking the lower lands. On the ridge we crossed the spoor of a party of birds judged to be Ptarmigan, which we followed up carefully for some distance, keeping a most diligent look out ahead and finally pulling up suddenly within ten yards of five "Rjūpa," looking remarkably pretty on the snow. The tracks of the Arctic fox, too, were numerous, bearing out the report that it was a common species in the district. All the smaller tarns proved to be ice-locked, and the Ducks, almost entirely Long-tails, had congregated on the surface of, or were flying around, the larger or Swan-lake, where the margins only were fringed with ice. The Great Northern Divers still floated unconcernedly in the middle, but the Swans, not so indifferent to the great change come over the scene since our last visit, had bidden farewell to their summer haunts. On our homeward march we fell in with, and secured, a solitary "Rjūpa," an old male bird. Although to some extent the day was a little disappointing, yet we were very pleased to have obtained Ptarmigan at a much greater elevation than we had hitherto observed them, viz. 2500 feet; and it is very doubtful if we should have found them at all without the aid of the tell-tale snow.

Our last two days at Valthjofstaðr, the 24th and 25th, were spent in duck-shooting in the marshy meadows in its immediate vicinity, where Mallard, Wigeon, and Teal had become much more numerous since the snowstorm on the 22nd. Some few of the Wigeon had moulted their primary quills and were quite unable to fly. On the 25th an adult Iceland Falcon was observed ranging over the pools, and a capital view was obtained of it, especially as it made off on our appearance, when the black-and-white became very distinct against the background formed by the mountain-side to which it sped. As a consequence of its visit, the Duck skulked, and were most difficult to find. On the 26th we left our comfortable quarters at Valthjofstaðr *en route* for Seyðisfjörðr, to join the steamer 'Craigforth,' which was to sail for Scotland on the 29th. We had hoped to ride back *viâ* Hallormstaðr for the birch-forest; but the swollen state of the rivers made fording impossible, and we had, in consequence, to take the western side of the lake, passing the night at the farmhouse at As (pronounced "Ous"). Close to As, a fine crag abuts on the lake, where, we were informed, a pair of large Falcons had nested in the spring, driving away a pair of Ravens from their favourite breeding-haunts. These birds, we were assured, were not Iceland Falcons, which are well known, being described as rather smaller; and had the Peregrine been a recognized Icelandic bird we should have supposed it to be that species.

On the 27th we continued our journey along the margin of the lake, passing through some promising bird-country, both crag and marshland, no doubt in summer the haunt of many interesting species, but now the Raven was the only bird seen. In a crag by the side of a waterfall a this year's nest of the Iceland Falcon was pointed out to us. Crossing the lake by boat, with the ponies in tow at the stern, we ascended the lofty pass of the Fjardar heiði, or Fjord-Heath, lying between us and the sea, now snow and ice-covered, the latter strong enough to bear the weight of man and horse, and arrived at Seyðisfjörðr in the evening.

Our last day in Iceland, the 28th of September, was a most wintery one, snow falling at intervals all day accompanied by a north-westerly gale. At midday we went on board the 'Craigforth,' and from its deck watched several

Iceland Gulls in mature and immature plumage which the approach of winter had brought into the fjords. They often came close to the ship, whereby we had ample opportunity afforded us for observing them minutely. Just after daybreak on the 29th we steamed down the fjord, watching numerous Eiders, Cormorants, and Gannets, and left behind us a country peopled by a highly civilized and educated race, a people from whom we had received the greatest consideration and hospitality. To Pastor Sigurdar Gunnarsson and his most excellent wife, under whose roof some of the happiest days of our lives were spent, we shall ever be indebted for the greatest kindness and for their unceasing solicitude to make our trip a success. We reached Leith on the 3rd of October, after a very stormy voyage, during which the barometer fell to 27·8 inches.

We will now proceed to offer a few remarks upon the results of the trip and a description of the autumn plumage of *Lagopus rupestris*.

Our experience may throw some light on the date of departure of the summer visitors to Iceland. The chief of these belong to the order Limicolæ, and at the date of our arrival on the 10th of September all had departed save a few Golden Plover, the last of which were observed on the 25th. We noted, however, the Ringed Plover, Oyster-catcher, Common Snipe, Whimbrel, and Dunlin on the Faröes, between the 4th and 7th, and in all probability these species at least had not left Iceland many days before our arrival. The Red-necked Phalarope, an extremely common species in the district visited by us, had also departed; and the Whoopers, as already stated, left between the 16th and 23rd of September. As against this great blank amongst the Waders, we noted the presence of all the few migrants to Iceland among the Passeres, viz. the Redwing, Wheatear, White Wagtail, Meadow-Pipit, and the rarer Redpoll. Most of these were somewhat frequently observed, even to a late date, while the Meadow-Pipit was still common at Valthjofstaðr on the day of our departure, the 26th. These observations, bearing on the date on which the summer migrants leave Iceland, were made during a season regarded by the inhabitants as a more than usually fine one.

We were both surprised and disappointed not to have seen the Northern Wren (*Troglodytes borealis*) in Iceland; for although very locally distributed in the country, yet since it occurs in the brushwood of the Fnjoska, we had fully expected to find it at Hallormstaðr. It does, however, occur in the Lagarfljot; for our friend Dr. Kjerulf, no mean ornithologist, told us that it was not uncommon about the farmhouses, where it is chiefly seen in the early morning. From this gentleman we also learnt that a Snowy Owl was shot in the forest at Hallormstaðr during the late summer of 1882, and that several others were observed there about the same time, no doubt a family party from a nest somewhere in the neighbourhood. Mr. Gunnarsson had seen the bird shot, when still in the flesh, and described it as being almost entirely white with only a few black spots. Another bird, the occurrence of which the Doctor considered worthy of notice, was a Heron, also shot in the Lagarfljot valley, in the autumn of 1882.

During our stay at Valthjofstaðr we had related to us by Mrs. Gunnarsson's mother some reminiscences of the Great Auk. This old lady, Mrs. Simondson by name, now in her seventy-ninth year and in full possession of all her mental faculties, informed us, through her daughter, that she well remembered many "Geir-fugl" being brought into Reykjavik, some of which she had seen alive, and well described the upright posture assumed by them. She especially remembered one occasion, when she "was grown up and was at least twenty years of age," the mail-boat making a large capture, and she herself saw a "sackful" on board. These were obtained no doubt while the vessel was becalmed off the islets of the S.W. coast, where the species was by no means uncommon early in the present century.

The specific identity of the Ptarmigan of Iceland, *Lagopus rupestris* (Gmelin), has been a matter of some uncertainty. Professor Newton in his useful contribution to Mr. Baring Gould's 'Iceland, Its Scenes and Sages' (1863), says of this species (under the title of *Lagopus islandorum,* Faber):—"it is by no means certain to me whether the former [the Icelandic species] is not identical with that of Greenland (*Lagopus rupestris,* Brehm), and this, again, with *Tetrao rupestris* of older authors." Mr. W. G. Lock, in his useful 'Guide to Iceland' (1882), is much less happy in his remarks, for he says "there is little doubt that there are three varieties [of Ptarmigan in Iceland], the Ptarmigan (*Lagopus alpina,* Linn.), identical with the Norwegian Fjeld-ryper; the Willow-Grouse (*L. subalpina,* Nilss.), identical with the Norwegian Dal- or Scov-ryper, and a hybrid produced by the interbreeding of these birds." As we cannot for a moment countenance such ideas, we refer our readers to page 76 *et seq.* of Mr. Lock's book, and to his article in the 'Field' (July 5th, 1879), for further information and "proofs." We handled some fifty specimens, in the flesh, of Ptarmigan obtained in Eastern Iceland, at elevations varying from 100 to 2500 feet, and from the wooded valley of the Fnjoska in the north near Akureyri. All of these, it is almost needless to remark, belonged to the one species found in Iceland, *Lagopus rupestris.*

Lastly, in a paper entitled a "Brief review of the Lagopodes," contributed to the 'Zeitschrift für die gesammte Ornithologie,' 1884, p. 90, Dr. Leonhard Stejneger while "provisionally" considering this a separate species, *Lagopus islandorum* (Faber), confesses that for want of material he is at present unable to point out its characters and affinities with certainty; but he remarks that it is said to be distinguished by a heavier bill, larger size, and browner plumage than its nearest allies.

Autumn plumage of Lagopus rupestris *.

Adult male. Upper parts with each feather vermiculated with brownish grey and brownish black in about equal proportions, giving them a generally brownish-grey tint. The younger specimens show a tendency to have the brownish grey replaced by an approach to the orange-brown of summer plumage. The underparts, in tint, resemble generally the summer plumage, the chief difference being the presence of a few black feathers on the chin and a greater preponderance of white on the abdomen. In one or two of our specimens the white plumage of winter shows itself on the throat.

---

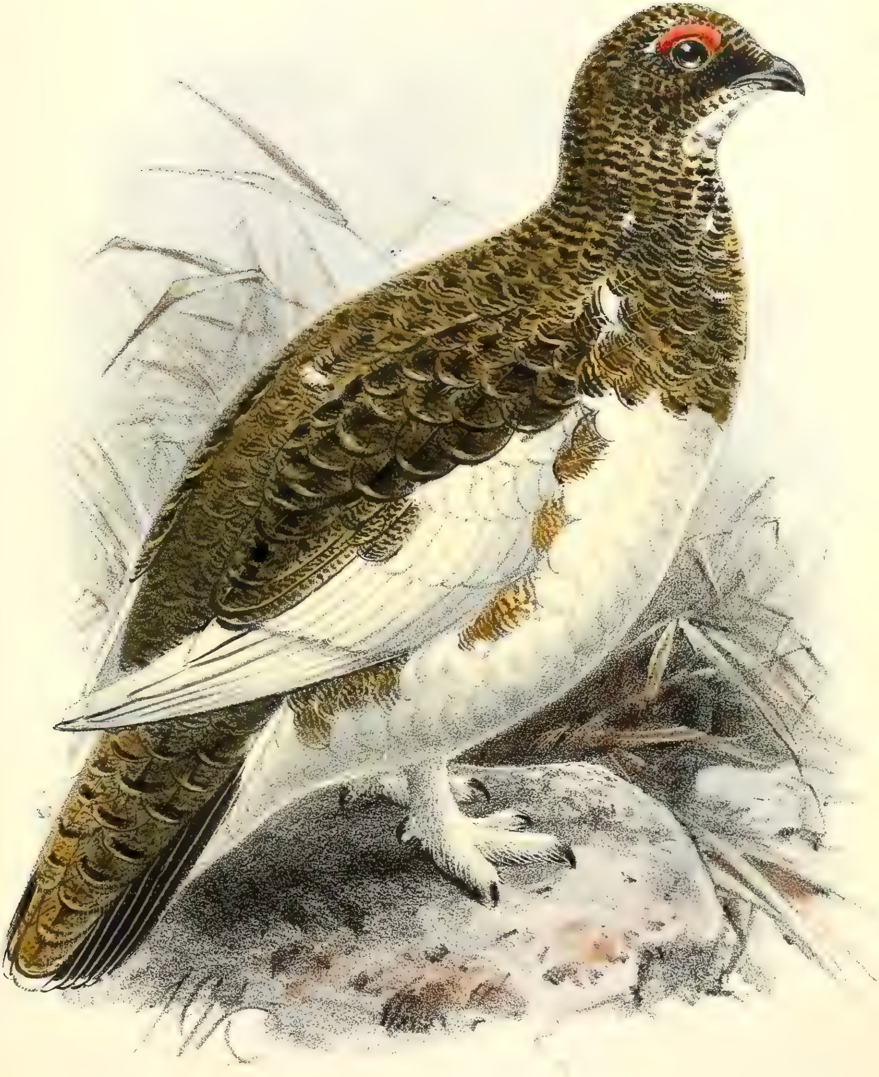
* Through the kindness of Professor Newton we have been enabled to compare our series with specimens in his collection obtained in summer in Iceland and in early autumn in Greenland.

The specimen figured (Plate IX.) was obtained on the Fljotsdals heiði, at an elevation of 2500 feet, on the 23rd of September, 1884, and is in Backhouse's collection.

Adult female. Upper parts.—As compared with a specimen shot in Iceland on the 4th of July, 1858, our specimens (five in number) differ in having the feathers of the hind neck barred with black and buff, whilst in the July specimen the neck and head very much resemble the back, and are boldly blotched and barred with pale cinnamon-brown and black.

Under surface.—The barring on the chin more or less obscured by the white of winter plumage. The neck and upper breast barred creamy white and black. Breast and abdomen white. A few of the cinnamon and black feathers of summer still show on the flanks, and one or two on the abdomen, but are very loose and readily become detached if handled. The mandibular portion of the black transocular patch is more or less pronounced. The tail tipped with white. The barred throat is the chief characteristic of the adult female.

Birds of the year. The twelve males and females of our series make it clear that the sexes are practically alike, both resembling the mother bird in having the neck both before and behind barred with buff and brownish black. They appear to be further advanced towards winter plumage on both surfaces than the adult birds, that is to say, there is a greater admixture of pure white with the coloured feathers. The back-feathers, especially the scapulars, are brownish black with lateral bars of pale orange-buff, not quite reaching the centre of the feather. Forehead chiefly white, with a few coloured feathers. Tail black, broadly tipped with white.



J G Keulemans lith

Hanhart imp.

LAGOPUS RUPESTRIS ♂.

Underparts.—On the upper throat the bars are broad, on the lower throat narrow, and both of the same tint as the feathers of the back, *i. e.* brownish black and buff. Breast and abdomen white, with a few barred black and buff feathers on the flanks. Chin white, with more or less trace of the coloured feathers. The young males have the transocular patch more pronounced than the females.

Professor Newton, to whom a series of skins was submitted for inspection, and who instituted a comparison between them and those of various Lagopodes in his possession, makes the following interesting remarks:—" Without doubt they fully substantiate the opinion I have before expressed, that *Lagopus rupestris* does not in autumn assume the ash-grey plumage seen at the same season in *L. mutus*, but I never before had convincing evidence to that effect. One of the most remarkable things about your series is that so many of the male specimens show traces of the orange-coloured feathers (barred with black) on the neck, breast, and flanks, which I had thought to be indicative of the female only. Though I see that some of these are marked by you ' adult,' I cannot help thinking that they must be birds of the year. Your specimen obtained on September 18th is almost feather for feather like one I have from Mr. Whymper from Greenland (and therefore *L. reinhardti* of authors) bearing on its ticket ' Lichtenfels, 14th Sept. 1873.' Diverse as is the plumage of your specimens, I see in it only *individual* variation such as Mr. Buckley (P. Z. S. 1882, p. 112) showed to occur in Red Grouse killed on the same ground and at the same time of the year. I should decline considering *L. rupestris* to be divisible into local races, as regards at least Greenland and Iceland. I have no specimen, unfortunately, from the American continent, and Spitsbergen examples certainly seem to be bigger than those from Greenland or Iceland, but otherwise I fail to distinguish them. Now I know that size means very little in the true Ptarmigan; examples from the Norwegian ' Alps ' are much smaller than those from (*e. g.*) the island on which Hammerfest stands, and therefore I attach not much importance to this fact.

The great differences, as appears to me, are these—(1) that *L. mutus* ♂, in spring, has the breast clothed more or less in deep *black* feathers, not one of which is to be seen in *L. rupestris*, and (2) that *L. mutus* (of both sexes) in autumn puts on a lavender-grey upper dress, of which there is only the least trace in any examples of *L. rupestris* (your nos. 5 and 6 [both adult males and one of which is figured] showing the most of it that I have ever seen), while the majority [being younger birds] have not any trace of such a colour. The female specimens of your series are also very interesting, but call for no particular remark, except that the coloured portion of their plumage is darker than I had expected to see, judging from others, killed in autumn, that I have."

XL.—*Stray Ornithological Notes.* By W. Edwin Brooks, Milton, Ontario, Canada.

Since I came to Canada I have principally paid attention to the birds of European affinity, to the neglect of the so-called "Warblers" of Canada, with their sharp-pointed, almost Parine bills, although my youngest son takes a great interest in the latter.

One of our commonest birds in Ontario is the Shore-Lark (*Otocorys alpestris*). During the comparatively mild open winter of 1881–1882 some of these birds remained here the whole winter. Even in January, during fine frosty mornings, I heard them singing, usually seated on the top of the fence-posts; we have no hawthorn hedges here, only wooden rail fences. The song of the Shore-Lark has been sometimes spoken of as very melodious, but I do not think any bird has a poorer one; it is almost exactly like that of the European Common Bunting, a sort of monotonous drawl. Unlike any other species with which I am acquainted, this bird has a second song, perhaps even less melodious than the drawl, a feeble unmusical twitter, which it does not often utter, and I only remember hearing it as the bird soared round, something in the manner of a Sky-Lark; but it also sometimes sings its first and principal song on the wing. However, the Shore-Lark's is not the only very poor song that has been termed pretty.

This species begins to breed very early. On the 2nd April, 1884, I took a nest in a pasture-field about 200 yards from my house, with three eggs, which were somewhat incubated, and must have been laid by the 27th of March, the building of the nest having been commenced perhaps a week earlier. There was a fall of snow after the female had begun to sit, and her warmth had melted a small hole, about five inches in diameter, above the nest. A month or so later, my son Allan found a nest of young birds in one of my wheat-fields. This year we found another nest with four eggs, in a clover-field close to the house, on the 27th of May, the eggs in it being somewhat incubated; but the spring this year was a late one, the snow remaining on the ground till the beginning of April. I have only seen one species of Shore-Lark here, viz. *O. alpestris*. The amount of yellow about the throat is variable, and it fades away as the summer advances, often leaving the part formerly yellow quite white. After the autumn moult the yellow is regained.

During the winter of 1882–3 I procured a good number of Mealy Redpoles, *Linota linaria* (Linnæus), which remained about till the beginning of April, and I frequently heard the males singing. The song is even poorer than that of the Shore-Lark, being the same note very rapidly repeated; and those who have heard the song of the American Chipping Sparrow will understand the style of that of the Mealy Redpole. Its voice and song differ from those of the Lesser Redpole, *L. rufescens*; it is, too, a much larger bird, the largest I got measuring 5·7 inches; but about 5 inches is the length of an average male. Males in the red plumage may be obtained as soon as they arrive, in the beginning of November; they are then browner and less mealy-looking. As the spring advances, the fulvous feathers fade to almost or quite white. The males, however, become much brighter red as summer approaches, a male dated May, given to me by Mr. Dresser, being intensely red. It should be remembered that the red plumage is as much a winter plumage as any, inasmuch as it is assumed at the autumn moult by, I believe, young birds of the year only. The great majority of the males were in the grey-brown (or female) plumage, including the large 5·7 in. bird, before mentioned. As in the case of Crossbills, Pine-Grosbeaks, and other red-plumaged birds, the fine red colour appertains only to the young male, and, once moulted, is never regained. The rump and under tail-coverts are always boldly streaked.

I frequently heard Redpoles flying by, in the fall, uttering a different note from this species, and some of them appeared to me decidedly larger than it. This year some settled in my orchard; and Allan procured a very fine rosy male on the 3rd of February, out of a mixed flock in which the Mealy Redpole was much the more numerous. We heard the call-note of the second species, and agreed that it was different from that of the Mealy Redpole; and the above example I identified as *L. exilipes* (Coues). It measured 5·3 inches in the flesh, so that it can hardly be said to be a larger bird than *L. linaria*. Speaking of this species, Mr. Seebohm says:— "Some writers make a fourth species, *L. exilipes* (Coues), which may be said to be intermediate between the Arctic and the Greenland forms. In the valley of the Petchora we found both *L. linaria* (Linn.) and *L. exilipes* (Coues), and came to the conclusion that the latter is nothing but the fully adult winter plumage of the former" ('Siberia in Europe,' p. 51).

Now why was such a conclusion arrived at? Mr. A. O. Hume and I came to the conclusion that the buff plumage of *Aquila fulvescens* (Gray and Hardwicke) was the young plumage of *Aquila clanga* (Pallas); but we made a notable blunder. I first jumped to the conclusion, I hardly know why, and my friend coincided! The two species were in company, searching for frogs in a dried-up marsh. But a rash conclusion should not be drawn because birds are in company; for how often have I seen Snow-Buntings mixed with Redpoles. Even to oblige my friend, I can never consent to the suppression of such a fine species of Linnet as

L. exilipes, and the man who discriminated it deserves all credit. The points of distinction are:—(1) difference in voice; (2) its spotless rump; (3) its white unstreaked under tail-coverts; (4) the few and narrow streaks on the flanks; (5) the very pale blush-red breast and rump, contrasted with the vivid red of *L. linaria*; (6) the very broad white edgings to the tertials and tail-feathers; (7) the very much whiter or mealy tone of the upper plumage; (8) the most decidedly smaller and shorter bill.

Now I think half this number of distinctive points would be ample to separate any small bird from another; and all the points I have noted are good ones. One Sunday a number of *L. exilipes* came and settled in a tamarac or larch tree, about five yards from my bedroom window. I examined them for some time as they fed on the cones, and they closely resembled the specimen I have, but I did not observe any with the pale rosy tint on the breast. We searched hard for them the next day, but not one was to be seen.

Last winter I went to Hamilton to examine a pair of the Greenland Redpole, *L. hornemanni,* killed in January 1860, near Galt, which is about 35 miles from here; they are now in the possession of Mr. T. McIlwraith, who has mounted them beautifully. From the difference in size, they appear to be male and female. The male looks about one third larger than my *L. exilipes,* of similar white mealy plumage, but has not the broad white edgings to the tail-feathers, the tail being more like that of the ordinary Mealy Redpole, as far as amount of white edging is concerned. The bird is very grey-and-white all over, with a few streaks about the breast of a greyish brown, and very few narrow pale ones on the flanks; there is the faintest possible rosy blush on the breast, like that observable on old examples of the Mealy Redpole which have passed their red stage. The females of the latter have also sometimes this faint pink blush, as well as those minute specks of reddish brown on the cheeks. The lower back of the large Greenland bird is very white, with one or two pale grey-brown dashes on the upper tail-coverts. The bill is the full size of that of the ordinary Mealy Redpole. The sides of the face are white, with a few small grey streaks, and there is none of the fulvous tinge sometimes observable on the cheeks of *L. exilipes*.

This Greenland bird may be briefly described as a white bird streaked with slate-grey. I noticed one narrow grey-brown streak on the central lower tail-coverts, and the supposed female is more boldly streaked on the lower tail-coverts. With reference to the example of *L. hornemanni* killed at Whitburn in England, Mr. Hancock writes :—" I have examined the Whitburn bird, and it has a streak or two on the under tail-coverts ; and another specimen like it, which I had from Seebohm, is also streaked on the under tail-coverts." All the specimens I have seen of *L. linaria* and of *L. rufescens* are boldly streaked on the lower tail-coverts. As far as I have ascertained at present, the spotless under tail-coverts of *L. exilipes* form a good distinction, apart from the general white tone of the bird. By any one who has even a moderate power of observation it should never be confounded with *L. linaria*. Both ends of the bird strongly proclaim distinctness.

Mr. McIlwraith's female *L. hornemanni* strongly resembles the male ; but the slate-grey predominates, while in the male the white predominates. It appears also to be of the size of an ordinary male *L. linaria*. I could not take any measurements, as they were in a large closed glass case with numerous other small birds.

To separate *L. exilipes* from *L. hornemanni* we have therefore :—(1) superior size of the latter ; (2) the want of the broad white edgings to tertials and tail-feathers ; (3) larger bill ; (4) longer wing. I forgot to mention that my male *L. exilipes* has a wing exactly 3 inches long.

When in good plumage I do not think there need be any difficulty in separating these four species of *Linota*. We hear a great deal about " intermediate forms," said to bridge over between species ; but it is a curious thing that I have not come across anything of the kind, and I have worked amongst small birds as much as most men. The fact is, men strongly imbued with Darwinian principles are not in a fit state of mind to distinguish one species from another, and their powerful bias impels them to confound things which differ. Species are not species with them, but evolved forms, and so it must be till they die; but it is not necessary that every one should follow their line of thought, which is most decidedly inconvenient in natural history. A man labours hard to discriminate a species, and the evolutionists would abolish it in a moment if they could. Fortunately they have never yet brought forward anything in the way of proof*.

A subject to which I should like once more to refer, if not out of place here, is the question, What is *Milvus govinda* of Sykes?

Lately, Mr. Gurney was kind enough to send me his 'List of the Diurnal Birds of Prey in the Norwich Museum,' in which he says, in a footnote (p. 80):—"Mr. Brooks here repeats the reasons which he had previously given in 'Stray Feathers,' vol. iv. p. 272, for considering that '*Milvus govinda*' of Sykes was intended by him as a designation of the larger migratory Indian Kite for which I have used the specific name of '*melanotis*;' but the habits of '*M. govinda*,' as described by Sykes, are not those of this species, but of the smaller Indian Kites, which are non-migratory."

This note of Mr. Gurney's will not settle the question against me. I have closely observed the habits of *M. affinis*, *ægyptius*, and *govinda*, and they are perfectly identical, as far as bold impudence is concerned. At Assensole both the large and the lesser Indian Kites were very common, and no one could distinguish them by their habits, so, with all deference to Mr. Gurney, Sykes's description of the habits will most perfectly fit the large Kite. We have one of Sykes's types, a *large* Kite of the species which Mr. Gurney calls *M. melanotis*; and, again, we have his description applicable *only* to the large bird, for the dimensions are those of the large bird. The accident of the small bird being in the same case does not invalidate the description, or render it inapplicable to the bird it clearly fits. Sykes did not know there were two species, and he has not described the lesser one at all, which, if not identical with *Milvus affinis,* as Mr. Gurney once supposed, requires a name; and this, I am afraid, would have to be the very inappropriate one of *Milvus palustris,* Anderson, applied to immature examples of the lesser Indian Kite (*vide* Pr. Asiatic Soc. Bengal, July 1873, pp. 142–147). I wish all ornithologists who are interested in this subject would carefully weigh what I have advanced, and would in future forbear to apply the term *govinda* to a Kite to which it is clearly inapplicable.

---

* [It is almost needless to say that we are not responsible for our correspondent's opinions.—Edd.]

Mr. Hume has often insisted that there were three species of Kite in India; but I think this is a mistake, for both the larger and the lesser Kites are very variable as to size. The lesser one, *M. affinis* as I term it, is also very variable in its plumage, which ranges from uniform sooty brown to warm reddish brown, and much spotted. In Cashmere, the large Kite, *M. govinda* (the *M. melanotis* of Messrs. Gurney and Hume), abounds; and I had very good opportunities, when there, of observing its habits. I took its eggs also in Cashmere: they closely resemble those of *M. affinis,* but are slightly larger.

And now that I have touched upon Indian birds, I should like to add a few corrections respecting some of them. In the first vol. of the Catalogue of Birds in the British Museum, Mr. Sharpe does not admit the distinctness of *Aquila fulvescens,* Gray and Hardwicke, from *A. vindhiana* (footnote, p. 243). A good many examples of this fine Eagle have been obtained, and it is now known in its different stages of plumage, which are quite distinct from those of other Eagles. The barred or non-barred tail is of little consequence; but the style of barring on the tails of *A. vindhiana* and *A. fulvescens,* when barred (which they sometimes are *very slightly*), is quite different, the one being diagonal and the other square across. Besides this we have a circular nostril in *A. fulvescens,* and an oblong one in *A. vindhiana* and *A. rapax.* However, *A. fulvescens* is well able to speak for itself as to identity, and I shall let Mr. Sharpe alone till the British Museum has an example of this rare Eagle. It had not one when I was there, and perhaps Mr. Sharpe had not then seen the bird. In his Catalogue Mr. Gurney protests against suppressing this Eagle, and refers to Mr. Sharpe's footnote above mentioned.

Sylvia minuscula, Hume.—This bird is only found in dry semi-desert places, and is not spread over India like *S. affinis*. In voice and habits, as well as in plumage, it strongly differs from *S. affinis*. I frequently met with it in Scind. About Sehwan it was very common.

Phylloscopus viridanus.—In vol. v. of the British Museum Catalogue, Mr. Seebohm gives *P. seebohmi* as a synonym. I examined the specimen very carefully and found the remains of the *upper* wing-bar. It was from Burmah, and none of the supposed *P. viridanus* from that country were correctly named. A very worn *P. plumbeitarsus*, such as *P. seebohmi* was, is not easily separated from *P. viridanus* similarly worn.

Phylloscopus viridipennis, Blyth.—I made a very careful examination of the two specimens (one of them the type) in the Calcutta Museum some years ago: they were small-sized examples of *P. trochiloides*. The name of the white-tailed Burmese bird should stand therefore as *P. presbytis*, Müller. Mr. Seebohm, in a footnote, contends that Müller's name must give way to Blyth's earlier name of *viridipennis*; but let Mr. Seebohm show, if he can, that Blyth described the white tail-feathers. All I can say is, I am absolutely certain Blyth's birds were *P. trochiloides*, a species which varies in size as much as *P. rufus* does; and Blyth was misled in discriminating the small ones just as I was mistaken in calling small *P. rufus*, *P. tristrami*. Blyth was much too good an ornithologist to overlook the white tail-feathers of *P. presbytis*. Blyth's specimens were in a very dilapidated condition when I last saw them, and by this time any conclusion drawn from them would be valueless; but *P. trochiloides* was obtained by Jerdon at Darjeeling, where the white-tailed bird is not found. Mr. Hume has often contended that the white-tailed bird is *P. viridipennis*; but such contention is useless when the type is *P. trochiloides*, and the description does not suit the white-tailed bird. If there be any doubt as to what bird Müller meant by *P. presbytis,* I have defined the white-tailed bird smaller than *P. trochiloides,* but similarly coloured, by that name. At all events a synonym of *P. trochiloides* cannot be applied to it.

Phylloscopus affinis.—Mr. Seebohm says (B. M. Cat. v. p. 65) :—"This species appears to be subject to little or no seasonal change of plumage; nor does the slight abrasion of the feathers which takes place in summer make any appreciable change in the appearance of the bird." What can Mr. Seebohm have seen! Frequently the bird loses all its green and all its yellow except the eye-stripe or a portion of it, and it is indeed hard to tell what the little faded bird is.

Phylloscopus tytleri.—Only one example on record from "the plains of India" (p. 67). I think it must winter in the lower hills.

Phylloscopus humii.—Winters all over India, and not only "in the valley of the Ganges" (p. 67).

Hypolais caligata (p. 86).—"This subspecies"! Its note differs from that of *H. rama,* and when newly moulted this bird is red-brown as contrasted with the mouse-grey of *H. rama.* No two species could be more thoroughly distinct.

Acrocephalus bistrigiceps (p. 94).—It is also found in Burmah.

Lusciniola indica (p. 127).—"Jerdon's *Grass*-Warbler" is a strictly arboreal bird and winters in the plains of India generally.

Lusciniola fuscata (p. 128).—"Blyth's *Grass*-Warbler" is, if anything, more truly arboreal. Neither are *L. schwarzi* nor *L. fuliginiventris* "Grass-Warblers."

Lusciniola flaviventris (p. 131).—This is an *Horornis.*

Lusciniola neglecta (p. 131).—"Hume's *Grass*-Warbler." No grass where I met with it. It affects babool (acacia) and tamarisk jungle.

Lusciniola melanopogon (p. 133).—"*Grass*-Warbler" again! It is an aquatic bird, a Reed-Warbler.

Cettia fortipes (p. 136).—The *Horornis*-group cannot be put into the same genus as *Cettia.* I protest also against my *H. pallidus* being suppressed. I know both it and *H. fortipes* in life, and they are distinct.

Cettia pallidipes (p. 139).—A so-called *Cettia*, which is *green* above and white below!!

Cettia squamiceps (p. 142).—Worse and worse! This is not a *Cettia* anyhow.

I notice that Dr. Scully (Ibis, 1881, pp. 90, 583), in quoting my name, *Alauda guttata*, for the common Sky-Lark of Cashmere, says he can only distinguish it from *A. gulgula* by its superior size. When freshly moulted the two birds are of very different shades of brown, the Cashmere one being dull purplish brown, while the bird of the plains is warm reddish brown. The Sky-Larks are the most difficult group there is; but clearly such a bird as *A. dulcivox* is distinct from the little *A. gulgula*.

XLI.—*On Mr. E. Lort Phillips's Collection of Birds from Somali-land.* By Captain G. E. Shelley, F.Z.S.

(Plates X.–XII.)

Mr. E. Lort Phillips, F.Z.S., accompanied by his friends Messrs. James, Aylmer, and Thrupp, left Berbera, on the Gulf of Aden, on the 22nd December, 1884, and returned there again towards the middle of the following April. They journeyed nearly due south along the parallel 45° E. long. to about 5° N. lat. On leaving Berbera they crossed for the first eight miles a low flat country and then ascended to the high plateau-land 3000 feet above the sea. This plateau is a parched desert for about six months in the year, and it was during this period that most of the specimens were collected. The Egyptian Vulture, although a constant visitor to their camp so long as water was obtainable, was never seen during their long desert march of fourteen days between the wells of Bourou and Gerlogobie, while Crows (probably *Corvus affinis*) never failed to appear in the neighbourhood as soon as the tents were pitched. Nearly all the Crows' nests contained eggs of the Great Spotted Cuckoo, and in one nest there were twelve eggs, four only belonging to the rightful owner.

The tableland, which extends from north to south for about 280 miles, is dotted over with thousands of gigantic ant-hills, which often rise to a height of 30 feet or more; and these during their return journey, in the latter end of March and beginning of April, afforded building-resorts for many species of birds, especially Little Owls and Parrots.

When the rains set in, the country soon presents a very different aspect, the plateau becomes quickly covered with fine grass, and the mimosas, which during the dry season resemble gooseberry-bushes in winter, become a mass of tender green leaves and yellow blossoms, which prove very attractive to the gaily coloured Sun-birds.

Wherever rock appears upon the surface the rain-water collects and forms shallow lakes, commonly called pans, which are soon tenanted by water-fowl. At Harradegit, one of these pans, there were some hundreds of Egyptian Geese, evidently mated, as they were grazing in pairs; at first they were very easy to approach, but soon became shy and watched the country from the tops of the ant-hills or the boughs of the higher trees. The highest trees always grow near these pans, and are selected by *Textor dinemelli* for their nests.

To the south of the plateau runs the Webbe Shebeyli, or Haynes river, through a fertile plain on which the natives grow an abundance of corn; and here, amongst the numerous water-birds, the Sacred Ibis was remarked as being extremely abundant.

An excellent account of this journey was read by Mr. F. L. James before the Royal Geographical Society on the 29th of June of the present year.

The collection of birds contains specimens of sixty-two species, of which I consider to be new to science six species and one subspecies; these are:—*Coracias lorti*, *Dryoscopus ruficeps*, *Telephonus jamesi*, *Argya aylmeri*, *Saxicola phillipsi*, *Parus thruppi*, and the subspecies *Cursorius gallicus somalensis*. Of the remainder over forty are new to Somali-land.

As the specimens are mostly in good condition, I have considered it advisable to give full descriptions of some of the most interesting. Mr. Lort Phillips has kindly furnished me with some field-notes.

At Mr. Lort Phillips's request I have named a species after each of his companions; and I am sure all ornithologists will agree that they justly deserve this mark of our appreciation of the great service they have rendered to our science.

1. MELIERAX GABAR.

Le Gabar, Levaill. Ois. d'Afr. i. 1799, pl. 33.

Falco gabar, Daud. Traité, 1800, p. 87.

Nisus gabar, Heugl. Orn. N.O.-Afr. pp. 73, xxviii; Finsch & Hartl. Vög. Ostafr. p. 86; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 116 (Lado); Fischer, J. f. O. 1855, p. 121.

Melierax gabar, Sharpe, Cat. B. Brit. Mus. i. p. 89.

Micronisus gabar, Salvad. Ann. Mus. Civ. Gen. 1884, p. 72 (Shoa).

Hab. Africa generally south of about 25° N. lat., except the West Coast from Sierra Leone to Angola.

"Fairly plentiful."

2. BUTEO AUGUR.

Buteo augur, Rüpp. Neue Wirb. 1835–40, p. 38, pl. 16. figs. 1, 2 (good); Heugl. Orn. N.O.-Afr. pp. 92, xxxv; Finsch & Hartl. Vög. Ostafr. p. 57; Sharpe, Cat. B. Brit. Mus. i. p. 175; Fischer, J. f. O. 1885, p. 122 (Mombas).

Buteo hydrophilus, Rüpp. tom. cit. p. 39, pl. 17. figs. 1, 2 (good).

Pterolestes augur, Salvad. Ann. Mus. Civ. Gen. 1884, p. 51 (Shoa).

Hab. E. Africa, between about 15° N. lat. and 4° S. lat.

"Only a single specimen was met with in the mountains about 30 miles inland from Berbera."

3. POLIOHIERAX SEMITORQUATUS.

Falco semitorquatus, Smith, Rep. Exp. Centr. Afr. 1836, p. 44; id. Ill. Zool. S. Afr., Av. pl. 1, ♂ (good); Heugl. Orn. N.O.-Afr. p. 38, pl. 1, ♂ juv. (back chestnut, as in ♀ ad.).

Hypotriorchis castanonotus, Heugl. Ibis, 1860, p. 407; Sclat. Ibis, 1861, pl. 12 (good, ♀ ad.).

Hypotriorchis semitorquatus, Sclat. P. Z. S. 1864, p. 107 (Bogue).

Poliohierax semitorquatus, Sharpe, Cat. B. Brit. Mus. i. p. 370; Salvad. Ann. Mus. Civ. Gen. 1884, p. 63 (Shoa); Fischer, J. f. O. 1885, p. 122 (Tana river).

Hab. E. and S. Africa, from Abyssinia to the Transvaal, and thence to Damara.

"Frequently seen perched on the tops of the low mimosa-bushes on the plateau. In March a pair appeared to be preparing to breed in a deserted nest of *Textor dinemelli*, in the midst of a colony of those Weaver-birds. The crops of the three specimens preserved contained lizards."

4. Tinnunculus tinnunculus.

Falco tinnunculus, Linn. S. N. 1766, p. 127; Heugl. Orn. N.O.-Afr. pp. 40, xvi; Dresser, B. Eur. vi. pl. 384.

Cerchneis tinnunculus, Sharpe, Cat. B. Brit. Mus. i. p. 425.

Tinnunculus alaudarius, Salvad. Ann. Mus. Civ. Gen. 1884, p. 64 (Shoa).

Hab. Africa, south to about 5° N. lat. in E. Africa, and 10° N. lat. in W. Africa.

5. Bubo lacteus.

Strix lacteus, Temm. Pl. Col. ii. pl. 4.

Bubo lacteus, Heugl. Orn. N.O.-Afr. pp. 112, xliii; Finsch & Hartl. Vög. Ostafr. p. 101; Sharpe, Cat. B. Brit. Mus. ii. p. 33; Fischer, J. f. O. 1885, p. 122.

Hab. Africa, south of about 15° N. lat., with the exception of the forest-region of the West Coast.

"Shot in February near Faf, in the Ogadayn district."

6. Carine glaux.

Noctua glaux, Savign. Descr. Egypte, Ois. p. 287.

Noctua veterum, Heugl. Orn. N.O.-Afr. pp. 118, xlv.

Carine glaux, Sharpe, Cat. B. Brit. Mus. ii. p. 135.

Athene glaux, Dresser, B. Eur. v. pl. 318.

Hab. N. and N.E. Africa southward to Somali.

The single specimen is peculiarly small.

"Fairly common throughout the country, living in holes in the ant-hills."

7. PŒOCEPHALUS RUFIVENTRIS.

Pionus rufiventris, Rüpp. Syst. Uebers. 1845, p. 83, pl. 32 (Shoa).

Pionias rufiventris, Heugl. Orn. N.O.-Afr. pp. 741, clvii.

Pœocephalus rufiventris, Speke, Ibis, 1860, p. 243 (Somali); Fischer, Zeitschr. ges. Orn. 1884, p. 372 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 78 (Shoa); Fischer, J. f. O. 1885, p. 122.

Hab. E. Africa, from Abyssinia to Masai-land.

"First seen on reaching the tableland, and afterwards fairly plentiful throughout the tour. They were generally seen in twos or threes, and, like most Parrots, were very noisy. They breed in the ant-hills."

8. DENDROPICUS HEMPRICHI.

Picus hemprichii, Hemp. & Ehr. Symb. Phys. 1828, fol. 2, p. 2; Heugl. Orn. N.O.-Afr. p. 804; Finsch & Hartl. Vög. Ostafr. p. 514; Shalow, J. f. O. 1883, p. 347 (Kakoma).

Dendrobates hemprichii, Rüpp. Syst. Uebers. pl. 35.

Dendromus hemprichii, Speke, Ibis, 1860, p. 245 (Somali).

Dendropicus hemprichi, Hargitt, Ibis, 1883, p. 433; Fischer, Zeitschr. ges. Orn. 1884, p. 370 (Masai); id. J. f. O. 1885, p. 125.

Hab. E. Africa, from Abyssinia to Zanzibar.

The specimen from South Mozambique referred to as *Dendrobates hemprichii,* Bianc. Spec. Zool. Mosamb. fasc. 18, p. 327, was preserved in spirits, and its determination, I consider, must consequently be uncertain.

This and the next species of Woodpecker were fairly plentiful where the Euphorbias grew, as they select these cactuses to breed in.

9. CAMPOTHERA NUBICA.

Picus nubicus, Gm. S. N. i. 1788, p. 439; Heugl. Orn. N.O.-Afr. p. 881; Finsch & Hartl. Vög. Ostafr. p. 508; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 109 (Lado).

Dendromus æthiopicus, Rüpp. Syst. Uebers. pl. 36.

Dendrobates æthiopicus, Speke, Ibis, 1860, p. 244 (Somali).

Campothera nubica, Hargitt, Ibis, 1883, p. 451; Fischer, J. f. O. 1885, p. 126 (Pangani).

Stictopicus nubicus, Salvad. Ann. Mus. Civ. Gen. 1884, p. 88 (Shoa).

Hab. E. Africa, from Southern Nubia to Pangani.

10. TRICHOLÆMA STIGMATOTHORAX.

Tricholæma stigmatothorax, Cab. J. f. O. 1878, pp. 205, 240 (Ndi); Fischer, Zeitschr. ges. Orn. 1884, p. 371 (Masai); id. J. f. O. 1885, p. 125.

Hab. E. Africa, between 10° N. lat. and 5° S. lat.

T. stigmatothorax is very nearly allied to *T. melanocephala,* from which it differs in the dark portions of the head and throat being dark brown instead of black, in the feathers of the forehead and front half of the crown being more or less spotted with small yellow tips to the feathers. In a specimen labelled "Ronga (*Fischer*)" the brown of the throat is uniform; in the present specimen, from Somali, the feathers of the throat have mostly small white tips.

"Fairly abundant throughout the tableland."

11. TRACHYPHONUS ERYTHROCEPHALUS.

Trachyphonus erythrocephalus, Cab. J. f. O. 1878, pp. 206, 218, 240, pl. 2. figs. 1, 2 (Kitui).

Hab. E. Africa, Somali and Kitui.

I have not been able to examine the type of *T. erythrocephalus.* The Somali specimen differs from the illustrations *l. c.* in having a distinct black crest, the eyebrows yellow, and the cheeks washed with yellow towards the eyes. It is also apparently rather smaller: total length 7·1 inches, culmen 0·9, wing 3·1, tail 3·1, tarsus 0·95. Forehead and crown glossy black, the feathers elongated, forming a slight crest; margin of the forehead, eyebrows, and remainder of the head and neck yellow, shading into bright red on the nape, ear-coverts, and hinder portion of the cheeks; a red band passes down the sides of the neck, and is surmounted by a white band, which extends over the back of the ear-coverts; the feathers of the nape and back of the neck are tipped with black; throat yellow, with a broad black band down the centre, chin fading into buff, base of the throat tinted with red; a narrow pectoral band, back, and wings black, with large pearl-shaped buffish-white spots; similar spots on the quills form four partial white bands; rump yellow; upper and under tail-coverts crimson; tail black, each feather with five or six large yellowish-white spots, passing into bars towards the outer feathers; remainder of the body buffish yellow, with the axillaries and under wing-coverts brownish white.

"Shot on the plateau. On another occasion three rose out of a dry well, where they were probably hunting for insects. Iris brown, bill brownish red, feet black."

12. HALCYON SEMICÆRULEA.

Alcedo semicærulea, Forsk. Descr. An. 1775, p. 2.

Dacelo semicærulea, Heugl. Orn. N.O.-Afr. p. 190.

Halcyon semicærulea, Sharpe, Monogr. Alced. p. 173, pl. 64; Finsch & Hartl. Vög. Ostafr. p. 160; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 110 (Lado); Salvad. Ann. Mus. Civ. Gen. 1884, p. 113 (Shoa); Fischer, J. f. O. 1885, p. 126.

Hab. The whole of Africa between about 17° N. lat. and 25° S. lat.

"These birds are never found far from water, and are apparently very plentiful at all seasons on the Webbe Shebeyli south of the plateau, and were also met with in the low country near Berbera. They only visit the tableland during the rainy season."

13. IRRISOR ERYTHRORHYNCHUS.

Upupa erythrorhynchos, Lath. Ind. Orn. i. 1790, p. 280.

Falcinellus senegalensis, Vieill. N. D. xxviii. p. 168.

Promerops melanorhynchus (Licht.), Gray & Mitchell, Gen. B. i. pl. 31 (good).

Irrisor senegalensis, Speke, Ibis, 1860, p. 244 (Somali).

Irrisor erythrorhynchus, Heugl. Orn. N.O.-Afr. p. 214; Finsch & Hartl. Vög. Ostafr. p. 202; Salvad. Ann. Mus. Civ. Gen. 1884, p. 106 (Shoa); Fischer, J. f. O. 1885, p. 127.

Hab. The whole of Africa south of about 16° N. lat.

The present specimens (an apparently adult and an immature bird) have the bill black; and Mr. Lort Phillips assures me that although the bird is common in Somali, he never saw a red-billed specimen.

They belong to the dark-billed race, well figured by Gray and Mitchell, *l. c.* This race inhabits Somali, Shoa, Abyssinia, and Senegambia, and to it belong the nine specimens recorded by Count Salvadori as collected by the Marquis Antinori in Shoa, seven specimens in the British Museum from Abyssinia, and nine specimens I have examined from Senegambia.

To the typical red-billed race belong thirty-seven specimens I have examined from localities south of the equator; of these, twenty-three S.-African, and seven E.-African from Dar-es-Salam to Mombas, have entirely red bills, and the remaining seven have black bills, but show evident signs of immaturity.

My reason for not separating these races rests upon the following data:—There are two typical red-billed specimens in the British Museum, labelled respectively "Darfur" and "N.E. Africa." One of Mr. Blanford's specimens from the Anseba valley has the bill half red and half black; the black in this specimen extends on the upper mandible in a sharply defined broad band from the nostrils, and covers the end third of both mandibles. Von Heuglin describes in his large work an entirely red-billed bird, which I presume was a N.E.-African specimen.

In the British Museum there is a remarkably purple-coloured specimen, labelled "♂, Objimbique." It has a reddish-black bill. These colours, however, are not sharply contrasted as in all the mottled-billed birds I have seen from north of the equator.

In the black-billed race the plumage is almost invariably more purple, the presence of a bright green gloss on the crown and mantle being rare, although occasionally present, but never, it appears to me, to the same extent as in the typical red-billed specimens.

Although generally the northern and southern forms may be easily distinguished, their characters are not always very sharply defined nor very constant; and as the typical red-billed form occurs in Darfur, their ranges overlap in the White Nile region, and we may presume they would interbreed.

14. IRRISOR MINOR.

Promerops minor, Rüpp. Syst. Uebers. 1845, pp. 25, 28.

Epimachus minor, Rüpp. tom. cit. pl. 8.

Irrisor minor, Speke, Ibis, 1860, p. 244 (Somali); Heugl. Orn. N.O.-Afr. p. 218; Finsch & Hartl. Vög. Ostafr. p. 206; Oustalet in Revoil's Faune et Flore, Çomalis, Ois. 1882, p. 7.

Hab. N.E. Africa, Shoa and Somali.

In the present specimen the white bar on the wing crosses the inner webs of the second to the seventh primaries, and there is a white spot on the outer webs of the seventh and eighth primaries.

I would here correct an error with regard to *Rhinopomastes cabanisi,* P. Z. S. 1882, p. 306. The sentence should read thus:—"This species is closely allied to *R. minor,* but may be readily distinguished by the absence of any white on the primaries."

15. UPUPA EPOPS SENEGALENSIS.

Upupa senegalensis, Swains. B. W. Afr. ii. 1837, p. 114; Finsch & Hartl. Vög. Ostafr. p. 199, note; Salvad. Ann. Mus. Civ. Gen. 1884, p. 105 (Shoa).

Hab. N.E. and W. Africa: Abyssinia, Shoa, Somali, and Senegambia. I am unable to define exactly what may be the full range of this subspecies.

The two specimens brought home from Somali agree perfectly with a specimen from Senegambia in my own collection. They are smaller than the true *U. epops,* but in other respects similar, with a similar white band across the primaries.

"Common everywhere."

16. MEROPS NUBICUS.

Merops nubicus, Gm. S. N. 1788, p. 464; Heugl. Orn. N.O.-Afr. p. 199; Finsch & Hartl. Vög. Ostafr. p. 183; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 111 (Lado); Salvad.

Ann. Mus. Civ. Gen. 1884, p. 92 (Shoa); Fischer, J. f. O. 1885, p. 127 (Lamu).

Hab. E. and W. Africa, south from about 16° N. lat. to Zanzibar on the east coast and to Bissao on the west.

"Fairly plentiful on the Webbe Shebeyli, generally in flocks."

17. MELITTOPHAGUS PUSILLUS CYANOSTICTUS.

Merops pusillus, P. L. S. Müll. S. N. Suppl. 1776, p. 95.

Merops erythropterus, "Gm.," Heugl. Orn. N.O.-Afr. p. 208; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 111 (Lado).

Merops variegatus, "Vieill.," Finsch & Hartl. Vög. Ostafr. p. 193.

Merops cyanostictus, Cab. in v. d. Decken's Reise Ostafr. iii. 1869, p. 34; Salvad. Ann. Mus. Civ. Gen. 1884, p. 110 (Shoa); Bohm. J. f. O. 1885, p. 47.

Melittophagus pusillus, Shelley, P. Z. S. 1881, p. 569.

Melittophagus cyanostictus, Fischer, J. f. O. 1885, p. 127.

Hab. E. and S. Africa, from Abyssinia to Pangani.

South from Pangani and in Benguela the specimens are nearly intermediate between this subspecies and the common South-African form, and the common South-African form is again intermediate between these latter specimens and those of West Africa, which are entirely without the blue frontal and superciliary band. In the colouring of the head and throat the present subspecies much resembles *M. lafresnayei*, but is smaller.

"Apparently not common; only seen along the water-courses. Iris red, bill and feet black."

18. MELITTOPHAGUS REVOILI.

Merops revoilii, Oustalet in Revoil's Faune et Flor. Çomalis, Ois. 1882, p. 5, pl. 1 (bad).

Hab. Confined to Somali-land.

Crown grass-green, with paler shaft-stripes, which are tinted with cobalt-blue towards their ends; sides of the forehead and a broad eyebrow cobalt-blue; ear-coverts and a broad loral band through the eye black; back of neck and front of back rufous-buff, with the ends of the feathers washed with bluish green; lower half of the back and upper tail-coverts cobalt-blue; scapulars and wings green, shading into brown on the inner webs and tips of the quills, which have their shafts also brown; tail green, partially washed with blue, and with an ill-defined rufous terminal edging to all but the four centre feathers; cheeks, chin, and upper throat white, shading on the remainder of the throat and breast into deep rufous-buff, slightly glossed with green; vent and under tail-coverts bright cobalt-blue; under wing-coverts and inner margins to the quills rufous-buff; remainder of the quills and under surface of the tail ashy brown; bill and legs black. Total length 6·2 and 6·7 inches, culmen 1·1, wing 2·9 and 3·1, tail 2·9, tarsus 0·4.

"Common on the plateau."

19. CORACIAS NÆVIA.

Coracias nævia, Daud. Traité, ii. 1800, p. 258 (Senegal); Sharpe, Ibis, 1871, p. 190, part.; Salvad. Ann. Mus. Civ. Gen. 1884, p. 114 (Shoa).

Hab. E. and W. Africa: Abyssinia, Upper White Nile, Somali, Senegambia, and Bissao.

Coracias pilosa, Heugl. Orn. N.O.-Afr. p. 173.

The two specimens in this collection have the crown pink, not shaded with olive, and thus differ somewhat from the South-African bird, which should, I think, be recognized as a subspecies under the title of *C. nævia levaillanti*.

"First seen about twenty miles south of Berbera, and was afterwards fairly plentiful, generally near water."

20. CORACIAS LORTI, sp. n.

Very similar in size and plumage to *C. caudata*; but differs in the lower half of the throat and entire chest being green, of the same colour as the abdomen, the pink of the throat not extending beyond the line of the end of the ear-coverts. Total length 13·2 inches, culmen 1·3, wing 6·3, tail 7, tarsus 1.

Hab. Somali-land.

"Seen only on two or three occasions on the plateau. Iris brown, bill black, legs grey."

21. CENTROPUS SUPERCILIOSUS.

Centropus superciliosus, Hempr. & Ehr. Symb. Phys. 1828, fol. 2; Rüpp. Neue Wirb. pl. 21. fig. 1; Heugl. Orn. N.O.-Afr. p. 797; Sharpe, P. Z. S. 1873, p. 620; Shelley, P. Z. S. 1881, p. 595; Salvad. Ann. Mus. Civ. Gen. 1884, p. 96 (Shoa); Bohm. J. f. O. 1885, p. 41; Fischer, tom. cit. p. 123.

Hab. E. Africa, between about 16° N. lat. and 8° S. lat.

"Only found frequenting the thick bushes and grass near the water-courses."

22. SCHIZORHIS LEUCOGASTER.

Schizœrhis leucogaster, Rüpp. P. Z. S. 1842, p. 9; id. Trans. Z. S. iii. pl. 17 (good).

Schizorhis leucogaster, Speke, Ibis, 1860, p. 245 (Somali); Heugl. Orn. N.O.-Afr. p. 707; Finsch & Hartl. Vög. Ostafr. p. 477; Hartl. Abh. nat. Ver. Brem. viii. 1882, p. 210; Fischer, Zeitschr. ges. Orn. 1884, p. 364 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 99 (Shoa); Fischer, J. f. O. 1885, p. 122 (Usaramo).

Hab. E. Africa, between about 12° N. lat. and 5° S. lat.

"Very common throughout the country. Feeds on the berries of the nebbuk thorn, and the cry exactly resembles the bleat of a goat. Bill and legs black."

23. TERPSIPHONE CRISTATA.

Muscicapa cristata, Gm. S. N. i. 1788, p. 938.

Muscicapa duchaillui, Cass. Journ. Philad. iv. pl. 50.

Muscicapa speciosa, Cass. Journ. Philad. iv. pl. 50.

Terpsiphone melanogastra, Heugl. Orn. N.O.-Afr. p. 441; Finsch & Hartl. Vög. Ostafr. p. 309.

Terpsiphone cristata, Sharpe, Cat. B. Brit. Mus. iv. p. 354; Salvad. Ann. Mus. Civ. Gen. 1884, p. 124 (Shoa); Shelley, P. Z. S. 1881, p. 577.

Terpsiphone ferreti, Zeitschr. ges. Orn. 1884, p. 353 (Masai).

Hab. E. and W. Africa, between about 16° N. lat. and 6° S. lat.

"Frequents the shade of the high trees which grow along the water-courses. Male—iris, bill, and feet slaty blue; female—iris red, bill and feet black."

24. Buchanga assimilis.

Corvus assimilis, Bechst. Lath. Allg. Uebers. Vög. ii. p. 562.

Edolius lugubris, Hempr. & Ehr. Symb. Phys. 1828, pl. 8. fig. 3.

Dicrurus lugubris, Speke, Ibis, 1860, p. 247 (Somali).

Dicrurus divaricatus, Heugl. Orn. N.O.-Afr. p. 422; Finsch & Hartl. Vög. Ostafr. p. 323; Fischer, J. f. O. 1885, p. 131.

Buchanga assimilis, Sharpe, Cat. B. Brit. Mus. iii. p. 247.

Hab. The whole of Africa south of about 16° N. lat.

"Common throughout the country. Iris red, bill and legs black."

25. Lanius dorsalis.

Lanius (*Fiscus*) *dorsalis,* Cab. J. f. O. 1878, pp. 205, 225 (Ndi).

Lanius dorsalis, Oustalet in Revoil's Faun. et Flor. Çomalis, Ois. p. 10.

Hab. E. Africa, Somali to Ndi.

Upper half of the head and hinder half of the neck black; back and scapulars grey, fading into white towards the ends of the scapulars and on the tail-coverts; tail, four centre feathers entirely black, the remainder black with broad white ends and an entirely white outer web to the outer pair of feathers; underparts white; axillaries black; under wing-coverts white, with a large dusky patch; quills black, with about the basal half of the primaries white; a dark rufous patch on the sides of the chest (a sexual character only); iris brown; bill and legs black. Total length 8·2 inches, culmen 0·65, wing 3·75, tail 3·6, tarsus 1·1.

This species is nearly allied to *L. antinorii,* Salvad., from which it differs in the scapulars being grey, not white; the secondaries entirely black, not tipped with white; a less amount of white on the two pair of outer tail-feathers; the axillaries being black, not white; and it is also slightly smaller. This comparison is taken from Mr. Gadow's description of the type of *L. antinorii* (Cat. B. Brit. Mus. viii. p. 255). The present species has been overlooked in that volume.

"Only met with on the tableland, where they appeared to be fairly plentiful. Female—iris brown, bill and legs black."

26. DRYOSCOPUS RUFICEPS, sp. n. (Plate X. fig. 1.)

Forehead and sides of the crown black; crown and nape very bright rufous; a broad white eyebrow extends over the sides of the forehead to behind the ear-coverts; lores, cheeks, ear-coverts, and sides of the neck black; remainder of the upper parts black, partially washed with grey towards the neck and lower back; a broad white longitudinal band down the wing, formed by the greater portion of the median series of wing-coverts and the broad white edges to about three of the middle secondaries; the lower back is strongly mottled with white; outer web of the tail broadly edged with white, and the three pairs of outer tail-feathers have broad white tips; entire underparts white, very faintly tinted with rufous on the flanks and thighs; under wing-coverts white, with the outer ones near the edge of the wing black, and a large dusky patch; under surface of the quills black, broadly edged with white on their inner webs towards their base; iris brown; bill black; legs dark grey. Total length 7 inches, culmen 0·7, wing 3, tail 3·4, tarsus 1·15.

Hab. Somali-land.

"Shot on the 2nd of January and seen on a few occasions afterwards. Iris brown, bill black, feet grey."

27. LANIARIUS CRUENTUS.

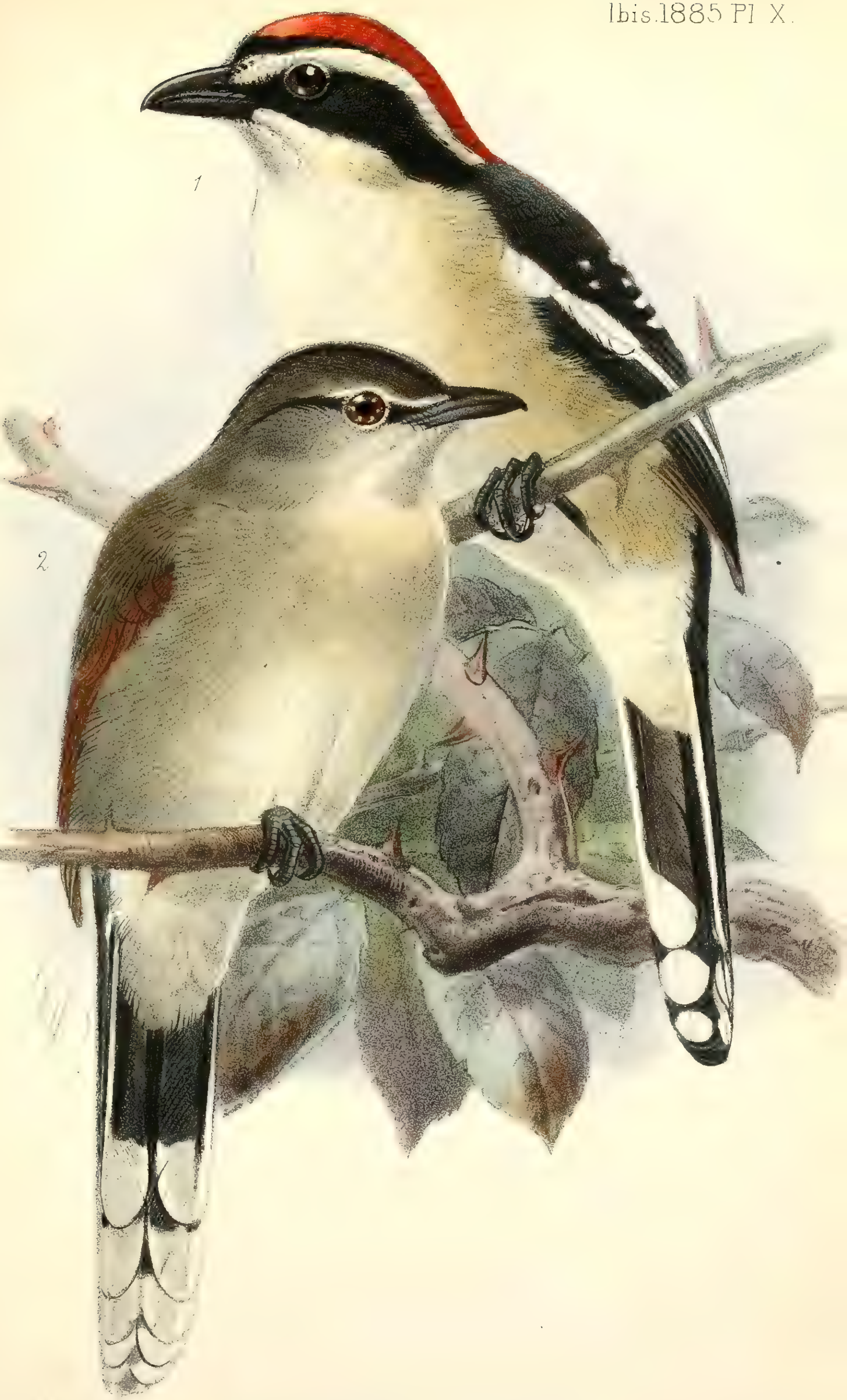
Lanius cruentus, Hempr. & Ehr. Symb. Phys. 1828, fol. c, pl. 3.

Laniarius cruentus, Speke, Ibis, 1860, p. 247 (Somali); Finsch & Hartl. Vög. Ostafr. p. 354; Gadow, Cat. B. Brit. Mus. viii. p. 152.

Dryoscopus cruentus, Heugl. Orn. N.O.-Afr. p. 462.

Hab. E. Africa, from about 15° N. lat. to Somali-land.

"Rather scarce: only seen on the plateau. Male—iris brown, bill black, legs grey."



J G Keulemans lith

1. DRYOSCOPUS RUFICEPS
2. TELEPHONUS JAMESI

Hanhart imp

28. TELEPHONUS JAMESI, sp. n. (Plate X. fig. 2.)

Upper parts brownish ash; a broad black band down the centre of the forehead, crown, and nape; a black band from the lores through the eye to over the ear-coverts; sides of the forehead and crown fading almost into white, forming an indistinct eyebrow; wing-coverts and broad outer edges to the quills chestnut, a few of the outer wing-coverts ashy brown, externally margined with white; edges of the wing white, remainder of the quills dark brown; tail, two centre feathers brownish ash obsoletely barred, remainder black, with broad white ends, broadest towards the outer pair of feathers, which have also the greater portion of the end half of the outer web white; cheeks, throat, abdomen, and under tail-coverts white, shading into pale brownish ash on the ear-coverts, chest, and flanks; under wing-coverts whitish ash; under surface of the quills ashy brown. Total length 7 inches, culmen 0·65, wing 2·65, tail 3·5, tarsus 0·9.

Hab. Somali-land.

"Only met with on two occasions on the plateau. Iris brown, with five beautiful white spots round the pupil; bill black; feet grey."

29. PRIONOPS POLIOCEPHALUS.

Lanius poliocephalus, Stanley in Salt's Trav. Abyss. 1814, App. p. 50.

Prionops cristatus, Rüpp. Neue Wirb. pl. 12. fig. 2.

Prionops poliocephalus, Sclat. P. Z. S. 1864, p. 109 (Usui); Heugl. Orn. N.O.-Afr. p. 454; Sharpe, Cat. B. Brit. Mus. iii. p. 231; Salvad. Ann. Mus. Civ. Gen. 1884, p. 120 (Shoa).

Hab. E. Africa, from about 15° N. lat. to Usui in 3° S. lat.

"Met with on three occasions in flocks on the tableland. Iris and eye-wattles yellow, bill black, legs red."

30. EUROCEPHALUS RUEPPELLI.

Eurocephalus anguitimens, Rüpp. (nec Smith), Syst. Uebers. 1845, p. 53, pl. 27.

Eurocephalus rueppelli, Bp. Rev. et Mag. Zool. 1853, p. 440; Heugl. Orn. N.O.-Afr. p. 487; Sharpe, Cat. B. Brit. Mus. iii. p. 280; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 97;

Shelley, P. Z. S. 1882, p. 307; Shalow, J. f. O. 1883, p. 357; Fischer, Zeitschr. ges. Orn. 1884, p. 350 (Masai); id. J. f. O. 1885, p. 130 (Barawa).

Hab. E. Africa, from about 15° N. lat. to 7° S. lat.

"Common, but shy, singly or in pairs, frequenting the topmost boughs of trees. Iris brown; bill and legs black."

31. ARGYA AYLMERI, sp. n. (Plate XI. fig. 1.)

Upper parts uniform ashy brown, shading into deep rufous-brown on the crown and forehead; nape and sides of the head slightly more rufous than the back, and fading into buff in front of the eyes; chin and throat buff with ashy-brown bases to the feathers, giving a somewhat scaled appearance to these parts; remainder of the underparts more rufous-buff, washed on the flanks, thighs, and under tail-coverts with ashy brown, under wing-coverts and partial inner margins to the quills rich rufous-buff, remainder of the quills ashy brown; bill brownish yellow; legs brownish flesh-colour. Total length 8·4 inches, culmen 0·7, wing 2·8, tail 4·8, tarsus 1.

Hab. Somali-land.

"Probably plentiful, but difficult to see, as they frequent the thick bushes and grass. They are very active, and constantly utter a cry somewhat resembling that of a mouse."

32. MONTICOLA RUFOCINEREA.

Saxicola rufocinerea, Rüpp. Neue Wirb. Vög. 1835–40, p. 76, pl. 27.

Thamnolæa rufocinerea, Heugl. Orn. N.O.-Afr. p. 369.

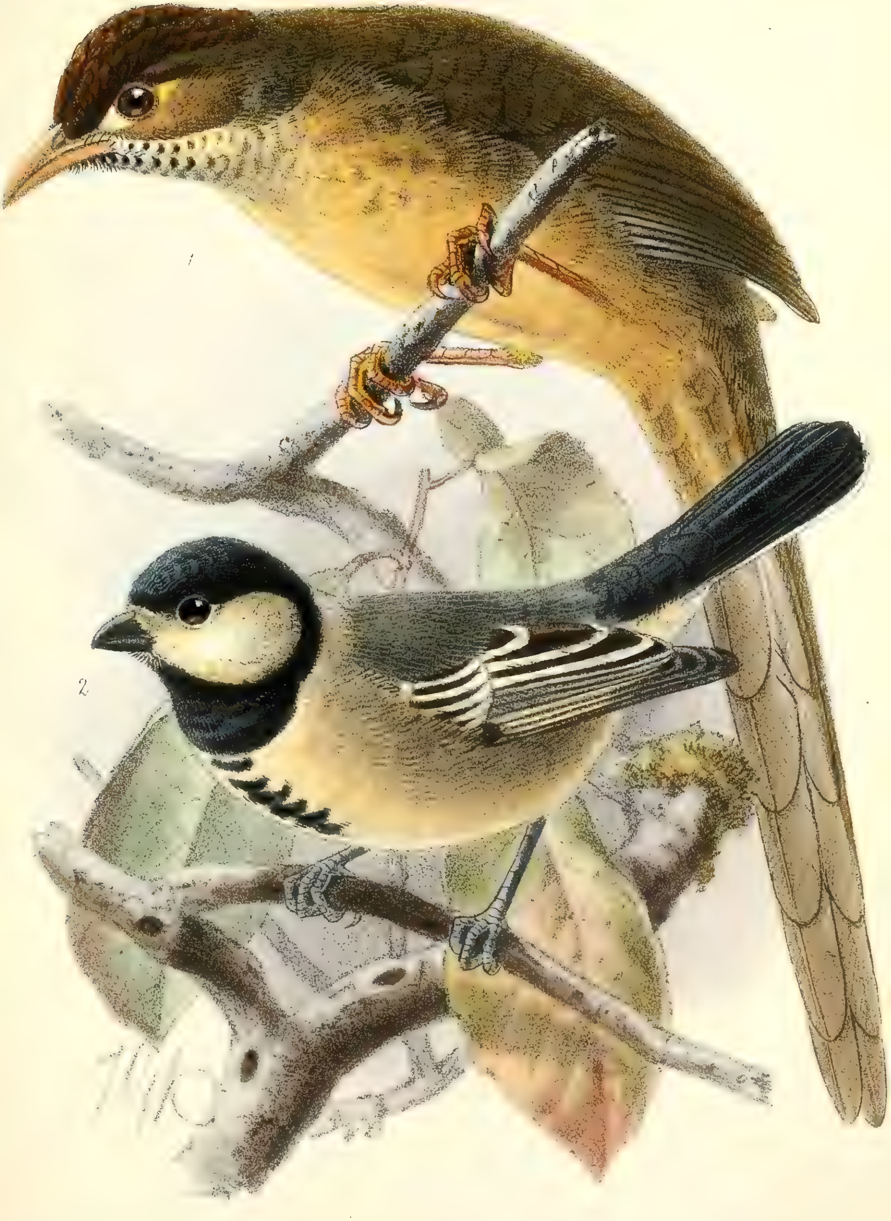
Monticola rufocinerea, Seebohm, Cat. B. Brit. Mus. v. p. 327; Fischer, Zeitschr. ges. Orn. 1884, p. 302 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 160 (Shoa); Fischer, J. f. O. 1885, p. 142 (Maiwascha in 0° 30′ S. lat.).

Hab. E. Africa, Abyssinia southward to Somali and Masai-land.

"Common about the mountains near Berbera. In their actions they much remind one of the Robin."

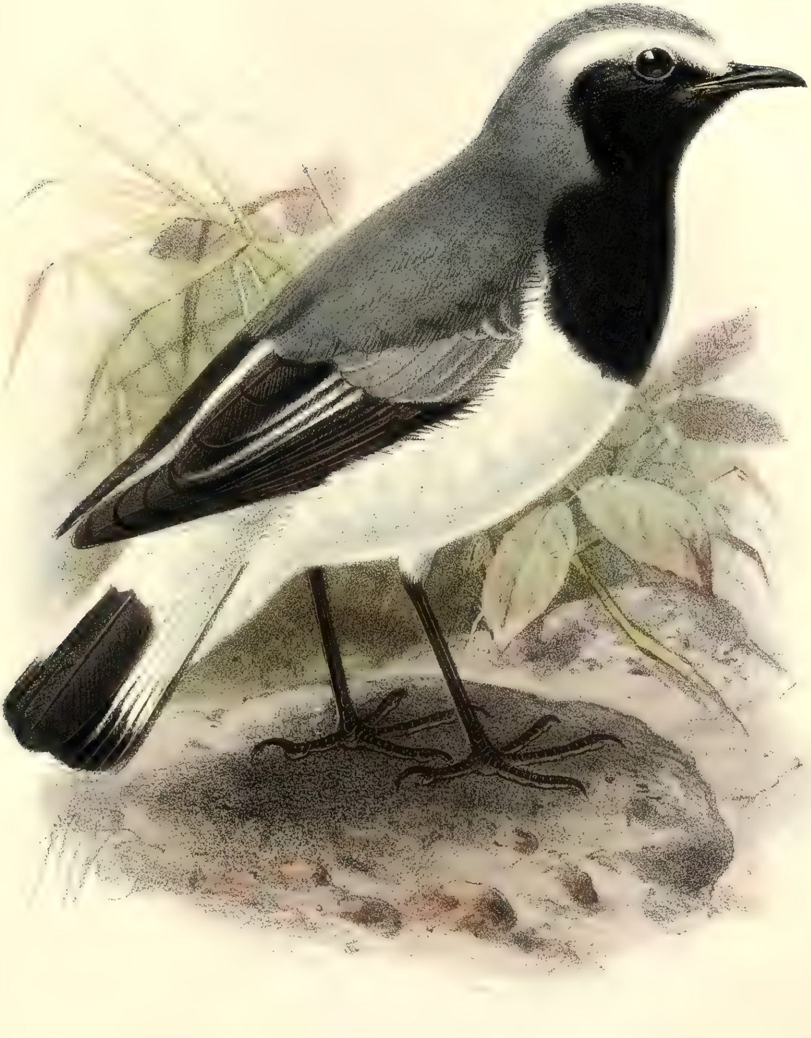
33. SAXICOLA PHILLIPSI, sp. n. (Plate XII.)

Crown, back of the neck, upper back, and scapulars ashy



J. G. Keulemans lith. Hanhart imp.

1. ARGYA AYLMERI.
2. PARUS THRUPPI.



J G Keulemans lith

Hanhart imp.

SAXICOLA PHILLIPSI.

grey; forehead and a broad eyebrow white; the wing-coverts paler grey than the back and with dark shafts; the spurious wing and the quills black, with broad white partial edges to a few of the secondaries; rump, upper tail-coverts, and a large portion of the tail white; remainder of the tail black; two centre feathers black, with the base white, the white diverging up the feathers for about one third of their length; the black on the remaining feathers forms a partial subterminal band and passes down their outer webs next to the shafts in a very acute angle for about two thirds of the length of the feathers, and is broadest on the outer feather, where it reaches to the margin for two thirds of its length; cheeks, ear-coverts, chin, throat, front of the chest, axillaries, and under wing-coverts black; remainder of the body and under tail-coverts white; under surface of the quills dusky with a silver gloss; bill and legs black. Total length 5 inches, culmen 0·5, wing 3·3, tail 2, tarsus 1·05.

The most marked characters for this species may be shortly summed up by comparing it with the figure of *S. seebohmi*, Ibis, 1882, pl. 14. In the present species the black of the throat descends much lower, on to the front of the chest; the wing-coverts, with the exception of the spurious wing, are pale grey or ashy white; the tail-feathers, with the exception of the centre pair, are tipped with white, and two thirds of the outer web of the tail is black; the thighs are white.

Hab. Somali-land.

"Shot on the 29th of December on the summit of the mountains near Berbera, and not observed elsewhere."

34. SAXICOLA DESERTI.

Saxicola deserti, Temm. Pl. Col. 1825, pl. 359. fig. 2; Heugl. Orn. N.O.-Afr. p. 352; Seebohm, Cat. B. Brit. Mus. v. p. 383; Dresser, B. Eur. ii. p. 215, pl. 27.

Hab. N. and N.E. Africa as far south as Somali-land.

"Common throughout the plateau."

35. SAXICOLA ISABELLINA.

Saxicola isabellina, Rüpp. Atlas, 1826, p. 52, pl. 34. fig. *b*; Speke, Ibis, 1860, p. 247 (Somali-land); Heugl. Orn. N.O.-

Afr. p. 344; Dresser, B. Eur. ii. p. 199, pl. 22; Seebohm, Cat. B. Brit. Mus. v. p. 399; Fischer, Zeitschr. ges. Orn. 1884, p. 305 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 164 (Shoa).

Hab. N.E. Africa, from the Mediterranean to Somali and Masai-land.

"Very common."

36. **Erythropygia leucoptera.**

Salicaria leucoptera, Rüpp. Syst. Uebers. 1845, p. 38, pl. 15.

Ædon leucoptera, Heugl. Orn. N.O.-Afr. p. 279; Cab. J. f. O. 1878, p. 221 (Ndi); Schalow, J. f. O. 1883, p. 366 (Merumi); Salvad. Ann. Mus. Civ. Gen. 1884, p. 136 (Shoa).

Erythropygia leucoptera, Sharpe, Cat. B. Brit. Mus. vii. p. 79; Fischer, Zeitschr. ges. Orn. 1884, p. 308.

Hab. E. Africa, between about 15° N. lat. and 7° S. lat.

"Common amongst the low bushes."

37. **Cinnyris habessinicus.**

Nectarinia habessinica, Hempr. & Ehr. Symb. Phys. 1828, pl. 4; Speke, Ibis, 1860, p. 247 (Somali-land); Heugl. Orn. N.O.-Afr. p. 229; Finsch & Hartl. Vog. Ostafr. p. 221; Oustalet, in Revoil's Faun. et Flore Çomalis, Ois. 1882, p. 8.

Cinnyris habessinicus, Shelley, Monogr. Nect. p. 205, pl. 63; Salvad. Ann. Mus. Civ. Gen. 1884, p. 139 (Shoa).

Hab. E. Africa, between about 16° N. lat. and 7° N. lat., from Kordofan to Somali-land.

"Very common amongst the mimosa trees throughout the country. The only other Sunbird seen was *C. albiventris*, which was also fairly abundant, but not so common as the present species."

38. **Parus thruppi**, sp. n. (Plate XI. fig. 2.)

Forehead, lores, cheeks, ear-coverts, and back of the neck white; crown, sides of the neck, throat, and centre of the breast glossy black; chin mottled with white; back, scapulars, and least series of wing-coverts ashy grey; remainder of the wing black, with broad white edges to the feathers, these edges broadest on the median and greater wing-coverts and the inner secondaries; upper tail-coverts and tail black, with white margins to some of the centre feathers and narrow white tips to the remainder; breast, thighs, and under tail-coverts sandy buff, shading into ashy grey on the sides of the body; under surface of the quills brown, with partial pale inner margins; under wing-coverts white; bill black; legs slate-colour. Male and female similar in plumage. Total length 4·65 and 4·3 inches, culmen 0·4, wings 2·45, tail 2 and 1·9, tarsi 0·7.

The nearest ally of this species is apparently *P. afer*, from which it differs in its smaller size, white frontal band, white mottling on the chin, and in the colour of the breast, thighs, and under tail-coverts.

Hab. Somali-land.

"Only met with on one occasion, near the centre of the plateau, where they were in a small party of about six. Iris brown, bill black, feet greyish black."

39. Mirafra cordofanica (?).

Mirafra cordofanica, Strickl. P. Z. S. 1850, p. 218, pl. 23 (Kordofan).

Geocoraphus cordofanicus, Heugl. Orn. N.O.-Afr. p. 687.

Above cinnamon with dark shaft-stripes; sides of the forehead and eyebrows buff; edges of the wing-coverts and of the primaries slightly paler; inner webs of the quills dark brown, broadly edged towards their base with cinnamon; upper tail-coverts slightly browner than the back; tail-feathers dark brown, the centre pair broadly edged and washed with cinnamon, the next four pairs are narrowly edged but more broadly tipped with rufous-buff, the outer pair have nearly their whole outer webs and broad ends buff; cheeks buff, shading into cinnamon on the ear-coverts; underparts buff, fading into white towards the chin and passing into cinnamon on the sides of the chest; the feathers of the lores and crop have a few dark triangular terminal shaft-spots; under wing-coverts and basal inner margins to the quills deep rufous-buff, remainder of the quills brown with narrow rufous-buff outer margins; bill horn-colour, passing into flesh-colour on the greater portion of the lower mandible; legs flesh-colour. Total length 5·6 inches, culmen 0·5, wing 3·2, tail 2·1, tarsus 0·9.

Hab. Kordofan, Somali-land, and Damara.

Although I refer the present species to *M. cordofanica,* it differs from the type, mostly in its darker colouring and in the absence of pale borders to the wing-coverts, which I regard as possibly due to season. It agrees well with a specimen in the British Museum labelled "*M. africanoides,* ♂, 12/6/66, Objimbinque (Andersson), no. 78. 10. 26. 350."

"Only met with on a few occasions, near the centre of the plateau. It perches on the topmost boughs of the trees, which it leaves with a quivering flight, like our Wood-Lark, pouring forth a peculiarly sweet song."

40. GYMNORHIS PYRGITA.

Xanthodina pyrgita, Heugl. J. f. O. 1862, p. 30; id. Orn. N.O.-Afr p. 627, pl. 21. fig. 2 (head); Fischer, Zeitschr. ges. Orn. 1884, p. 321 (Masai).

Gymnorhis pyrgita, Heugl. Orn. N.O.-Afr. App. p. cxl.

Hab. E. Africa, from about 15° N. lat. to 4° S. lat.

"I only observed on one occasion a small flock of these Finches near the centre of the plateau. Iris brown, bill purple, feet black."

41. URÆGINTHUS IANTHINOGASTER.

Uræginthus ianthinogaster, Reichen. Orn. Centralbl. 1879, p. 120 (Masai); Reichen. & Schalow, J. f. O. 1879, p. 326; Fischer & Reichen. tom. cit. p. 353, pl. 2. figs. 1, 2; Fischer, Zeitschr. ges. Orn. 1884, p. 324; id. J. f. O. 1885, p. 135 (Barawa, Massa, and Little Arucha).

Hab. E. Africa, Somali-land to Masai-land.

Head and neck cinnamon, sides of the forehead and cheeks ultramarine-blue; mantle and wings brown, washed with cinnamon towards the edges of the feathers; rump and upper tail-coverts ultramarine-blue; tail brownish black; breast and under tail-coverts ultramarine-blue, mottled on the front and sides of the chest with cinnamon, and thus the blue of the throat is detached into a collar; iris and bill red; legs black. Total length 4·8 inches, culmen 0·5, wing 2·15, tail 2·4, tarsus 0·6.

The specimen before me is not in very good condition, but I have described it because the figure of this species (J. f. O. 1879, pl. 2. fig. 1) is very misleading. The collar in the Somali specimen is broader than in the illustration and lower down, being only separated from the blue of the breast by two or three feathers, and all the blue parts are uniform in colour and ultramarine. The original description is fair.

"Not uncommon in small flocks throughout the tableland. Iris red, bill coral-red, feet black."

42. PYROMELANA FRANCISCANA.

Loxia franciscana, Isert, Schrift. Gesell. Nat. Freunde Berlin, ix. 1789, p. 332, pl. 9.

Fringilla ignicolor, Hempr. & Ehr. Symb. Phys. 1828, pl. 2.

Euplectes petiti, Kirk, Ibis, 1864, p. 322 (Zambesi and Shiré valley).

Euplectes ignicolor, Sclat. P. Z. S. 1864, p. 109 (Unyoro).

Euplectes franciscanus, Heugl. Orn. N.O.-Afr. p. 571; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 103 (Lado); Salvad. Ann. Mus. Civ. Gen. 1884, p. 184 (Shoa).

Pyromelana franciscana, Finsch & Hartl. Vög. Ostafr. p. 412.

Hab. E. and W. Africa: E. Africa from the Second Cataract of the Nile, 22° N. lat., to Unyoro 1° N. lat., and also from the Shiré valley; in W. Africa from the Gold Coast to Senegambia.

"Only plentiful on the Webbe Shebeyli in the cornfields, where it frequently assembles in large flocks of from fifty to one hundred."

43. TEXTOR DINEMELLI.

Textor dinemelli, Horsf. in Rüpp. Syst. Uebers. 1845, pp. 72, 76, pl. 30; Gray & Mitchell, Gen. B. ii. pl. 87; Sclat. P. Z. S. 1864, p. 109 (Unyamuezi); Heugl. Orn.

N.O.-Afr. p. 534; Finsch & Hartl. Vög. Ostafr. p. 386; Shelley, P. Z. S. 1882, p. 307; Schalow, J. f. O. 1883, p. 361; Fischer, Zeitschr. ges. Orn. 1884, p. 333 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 194 (Shoa); Fischer, J. f. O. 1885, p. 132.

Hab. E. Africa, between 12° N. lat. and 7° S. lat.

"These birds are fairly common throughout the country, frequenting the mimosa trees. They are very noisy when on the wing, and breed in colonies. Their eggs are green, thickly speckled with dark brown, and 0·95 inch long. In one of these colonies a pair of the small Hawk, *Poliohierax semitorquatus*, had usurped a nest, but were regarded apparently as welcome visitors by these sociable Weavers."

44. TEXTOR INTERMEDIUS.

Textor intermedius, Cab. v. d. Decken's Reis. iii. 1869, p. 33, pl. ii.; Finsch & Hartl. Vög. Ostafr. p. 385; Fischer, Zeitschr. ges. Orn. 1884, p. 333 (Masai).

Hab. E. Africa, between about 10° N. lat. and 4° S. lat.

"Very plentiful in flocks near Faf in the interior of the plateau, which in the rainy season becomes a lake. In March they were busily building colonies of nests in the higher trees. In habits they much remind one of Starlings, especially when feeding in flocks on the ground."

Iris brown, feet black; ♂ bill red, ♀ bill dark brown.

45. BUPHAGA ERYTHRORHYNCHA.

Tanagra erythrorhyncha, Stanley in Salt's Trav. Abyss. 1814, App. p. 58.

Buphaga habessinica, Hempr. & Ehr. Symb. Phys. pl. 9.

Buphaga erythrorhyncha, Speke, Ibis, 1860, p. 246 (Somali); Heugl. Orn. N.O.-Afr. p. 716; Finsch & Hartl. Vög. Ostafr. p. 384; Fischer, Zeitschr. ges. Orn. 1884, p. 334 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 196 (Shoa); Fischer, J. f. O. 1885, p. 132.

Hab. The whole of Africa south of about 16° N. lat.

"Common throughout the country. Iris and eye-wattles yellow, bill coral-red, feet brown."

46. COSMOPSARUS REGIUS.

Cosmopsarus regius, Reichen. Orn. Centralbl. 1879, p. 120 (Masai); Fischer, J. f. O. 1879, p. 299; Reichen. & Schalow, tom. cit. p. 324; Fischer & Reichen. tom. cit. p. 349, pl. 1. fig. 1; Fischer, Zeitschr. ges. Orn. 1884, p. 336; id. J. f. O. 1885, p. 132 (Massa and Pare).

Head and neck deep metallic green, shading into blue on the ear-coverts and into bluish violet on the back, wings, and crop; median and greater series of wing-coverts with black terminal spots, more or less marked on each feather; tail bronze, obsoletely barred and glossed with violet and blue towards its base and on portion of the inner webs of all but the centre feathers; the outer tail-feathers occasionally marked near their shafts and edges with buff; breast, thighs, under tail-coverts, and inner under wing-coverts rich golden yellow; remainder of the under wing-coverts metallic greenish blue; under surface of the quills and tail black; bill and legs black. Total length 12·3 to 13·3 inches, culmen 0·7, wing 4·7 to 5·25, tail 7 to 9, tarsus 1·15 to 1·3.

Hab. E. Africa, between about 10° N. lat. and 4° S. lat.

"Fairly abundant in small flocks throughout the plateau, where they frequent the ground and low bushes. Iris white, bill and legs black."

47. PHOLIDAUGES BICOLOR.

Speculipastor bicolor, Reichen. Orn. Centralbl. 1879, p. 120 (Kipini); Fischer, J. f. O 1879, pp. 281, 300; Reichen. & Schalow, tom. cit. p. 234; Fischer & Reichen. tom. cit. p. 349, pl. 1. figs. 2, 3; Fischer, J. f. O. 1885, p. 132 (Kipini and Wapokomo-land).

Upper parts and entire head and neck glossy black, with about the basal third of the primaries white; breast, under tail-coverts, and under wing-coverts creamy white, with the outermost under wing-coverts and the bastard primary black; bill and legs black. Total length 7·1 inches, culmen 0·6, wing 4·6, tail 3·4, tarsus 1·1.

Hab. E. Africa, between about 10° N. lat. and 2° 30′ S. lat., from Somali-land to the Tana river.

"Only met with in flocks on two or three occasions. They were very shy, and flew at a considerable height, frequently uttering their peculiar cry, which consists of a single whistling note. Native name 'Shimber Arnot' (Sheep-bird). They are said to be common in the Gudabirsi country to the west."

48. NOTAUGES SUPERBUS.

Lamprotornis superba, Rüpp. Syst. Uebers. 1845, pp. 65, 75, pl. 26 (Shoa).

Notauges superbus, Speke, Ibis, 1860, p. 245 (Somali); Heugl. Orn. N.O.-Afr. p. 517; Shelley, P. Z. S. 1881, p. 583 (Ugogo and Dar-es-Salaam); Hartl. Abh. nat. Ver. Brem. vii. p. 106 (Lado); Schalow, J. f. O. 1883, p. 360; Fischer, Zeitschr. ges. Orn. 1884, p. 335 (Masai); Salvad. Ann. Mus. Civ. Gen. 1884, p. 199; Fischer, J. f. O. 1885, p. 132.

Hab. E. Africa, from about 10° N. lat. to 7° S. lat.

"Very common throughout the country in flocks. They were breeding in March. Their nests are constructed of grass, and are nearly spherical, with a hole at the side, the whole structure covered over with thorny boughs, after the fashion of a Magpie's nest: they are placed near the ends of the boughs. Native name 'Shimber Lo' (Cow-bird). Iris white, bill and legs black."

49. NOTAUGES HILDEBRANDTI.

Notauges hildebrandti, Cab. J. f. O. 1878, pp. 205, 217, 233, pl. 2. fig. 1 (Kikamba); Fischer, J. f. O. 1885, p. 132 (Massa).

Head, throat, crop, back, scapulars, least and median series of wing-coverts, a broad outer margin to the wings, and the tail glossy violet-blue; back of the neck deep glossy olive-green; greater wing-coverts, secondaries, and inner primaries deep glossy green; median and greater wing-coverts with large subterminal broad black spots; breast, thighs, under tail-coverts, and inner under wing-coverts chestnut; remainder of the under surface of the wings and tail black, strongly glossed with violet on the smaller wing-coverts; bill and legs black. Total length 8·2 inches, culmen 0·6, wing 4·6, tail 3·6, tarsus 1·15.

Hab. E. Africa, from Somali-land to Massa and Kikamba.

"Very rare, only seen on two or three occasions on the plateau. They were remarkably shy, went in small flocks, and much resembled *N. superbus* in their habits."

50. NOTAUGES ALBICAPILLUS.

Spreo albicapillus, Blyth, J. A. S. Bengal, 1856, p. 301 (Somali-land).

Notauges albicapillus, Speke, Ibis, 1860, p. 246, pl. vii.; Heugl. Orn. N.O.-Afr. p. 520; Finsch & Hartl. Vög. Ostafr. p. 379.

Hab. E. Africa, confined to Somali-land.

Forehead and entire crown buffish white; loral band in front of the eye black; cheeks and ear-coverts dusky olive-brown; back of the neck, back, tail, inner secondaries, and the primaries glossy olive shaded with green; wing-coverts buffish white, with a large portion, especially the median and inner greater coverts, greenish bronze; spurious wing- and primary-coverts glossy green, like the back; outer secondaries buffish white for the greater portion of their outer webs, with the remainder of these feathers dusky black glossed with green; the feathers of the lower back and upper tail-coverts are mostly tipped with buff, and some of the outer tail-coverts have shaft-stripes of that colour; the tail-feathers are obsoletely barred; chin, throat, and chest dusky olive, with a slight greenish gloss, each feather with a broad buffish-white shaft-stripe; abdomen, thighs, under tail-coverts, and under wing-coverts buffish white; under surface of the quills dusky black, with buff outer margins to some of the secondaries; bill and legs black. Total length 10·8 and 10·6 inches, culmen 0·95, wing 6, tail 4·9, tarsus 1·55 and 1·6. The sexes are similar in plumage.

"Fairly plentiful towards the southern portion of the plateau. They breed in colonies in March, and are very noisy. Their nests are very similar to those of *N. superbus*."

51. TRERON WAALIA.

Columba waalia, Gm.

Columba abyssinica, Temm. & Knip, Pig. i. pl. 9.

Treron waalia, Heugl. Orn. N.O.-Afr. p. 817; Finsch & Hartl. Vög. Ostafr. p. 533; Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 117 (Lado); Shelley, Ibis, 1883, p. 265; Salvad. Ann. Mus. Civ. Gen. 1884, p. 206 (Shoa).

Hab. N.E. Africa, Somali-land, Socotra, and Senegambia.

"Only met with on the mountains where the fig-trees grow."

52. NUMIDA VULTURINA.

Numida vulturina, Hardw. P. Z. S. 1834, p. 52; Finsch & Hartl. Vög. Ostafr. p. 575.

Acryllium vulturinum, Elliot, Monogr. Phasianidæ, ii. pl. 38; Fischer, J. f. O. 1885, p. 119 (Barawa, Massa, and Pagani).

Hab. E. Africa, from Somali-land to Mozambique. It has been recorded by Dr. Hartlaub from W. Africa on the authority of Capt. Probyn, and has been introduced into Madagascar.

"Very plentiful in large flocks in company with *N. ptilorhyncha*, but only met with in the Ogadayn."

53. FRANCOLINUS GRANTI.

Francolinus granti, Hartl. P. Z. S. 1865, p. 665, pl. 39. fig. 1; Heugl. Orn. N.O.-Afr. p. 891; Finsch & Hartl. Vög. Ostafr. p. 589; Shelley, P. Z. S. 1881, p. 597; Fischer, Zeitschr. ges. Orn. p. 382 (Masai); id. J. f. O. 1885, p. 119.

Francolinus rovuma, Gray, List Gall. Brit. Mus. v. 1867, p. 52.

Francolinus shoanus, Heugl. Orn. N.O.-Afr. p. 891; Salvad. Ann. Mus. Civ. Gen. 1884, p. 110 (Shoa).

Francolinus ochrogaster, Hartl. Abh. nat. Ver. Brem. vii. 1881, p. 118; viii. 1882, pp. 218, 230 (Lado).

Hab. E. Africa, from about 10° N. lat. to 7° S. lat., from Shoa to the Rovuma river.

"Common throughout the country."

54. DENDROCYGNA VIDUATA.

Anas viduata, Linn. S. N. i. 1766, p. 205.

Dendrocygna viduata, Dubois, Orn. Gal. 1839, p. 71, pl. 44; Heugl. Orn. N.O.-Afr. p. 1298; Finsch & Hartl. Vög. Ostafr. p. 806; Salvad. Ann. Mus. Civ. Gen. 1884, p. 242 (Shoa); Fischer, J. f. O. 1885, p. 115.

Hab. The whole of Africa south of about 16° S. lat.

"Only met with a single pair of these birds in March. Iris brown; bill black, with the nostrils and tip lavender; feet black in the male, lavender in the female."

55. PŒCILONITTA ERYTHRORHYNCHA.

Anas erythrorhyncha, Gm. S. N. 1788, p. 517; Finsch & Hartl. Vög. Ostafr. p. 808; Fischer, Zeitschr. ges. Orn. 1884, p. 394 (Masai); Bohm, J. f. O. 1885, p. 62.

Pœcilonitta erythrorhyncha, Smith, Ill. Zool. S. Afr. pl. 104; Salvad. Ann. Mus. Civ. Gen. 1884, p. 244 (Shoa).

Querquedula erythrorhyncha, Heugl. Orn. N.O.-Afr. p. 1325; Fischer, J. f. O. 1885, p. 115 (Galla-land).

Hab. E. and S. Africa, from Abyssinia throughout the whole of East and South Africa.

"Shot on three occasions. Iris brown, bill black and light red, feet black."

56. IBIS HAGEDASH.

Tantalus hagedash, Lath. Ind. Orn. ii. 1790, p. 709.

Ibis chalcoptera, Vieill. Gal. Ois. pl. 246.

Ibis hagedash, Heugl. Orn. N.O.-Afr. p. 1141; Finsch & Hartl. Vög. Ostafr. p. 735; Fischer, Zeitschr. ges. Orn. p. 386; Bohm, J. f. O. 1885, p. 38; Fischer, tom. cit. p. 107.

Hab. The whole of Africa south of about 16° N. lat.

"Fairly plentiful on the Webbe Shebeyli. Iris yellow, bill black, with the basal half of the culmen red, feet black."

57. CURSORIUS GALLICUS SOMALENSIS, subsp. n.

Charadrius gallicus, Gm. S. N. 1788, p. 692.

Cursorius gallicus, Heugl. Orn. N.O.-Afr. p. 965; Dresser, B. Eur. vii. p. 425, pl. 514.

Hab. Typical race: N. and N.E. Africa. Subspecific race: Somali.

I have deemed it advisable to refer the present specimen to a subspecies on account of its small size. Total length 8·3 inches, culmen 0·95, wing 5·3, tail 2·5, tarsus 2·3. In colouring it resembles the typical race, but is much smaller, about equal in size to *C. senegalensis* and *C. burchelli.*

"Fairly common in small flocks throughout the plateau. Legs white."

58. Rhinoptilus cinctus.

Cursorius cinctus, Heugl. Syst. Uebers. 1856, no. 555; id. Orn. N.O.-Afr. p. 972; Fischer, J. f. O. 1885, p. 115 (Massa and Masai).

Hemerodromus cinctus, Heugl. Ibis, 1863, p. 31, pl. i. (good).

Hab. N.E. and E. Africa: Upper White Nile, Somali, Massa, and Masai.

"Only one pair met with, on the hills near Berbera, about the middle of April, at which season they were apparently breeding."

59. Rhinoptilus gracilis.

Corsorius gracilis, Fischer & Reichen. J. f. O. 1844, p. 781 (Masai); Fischer, Zeitschr. ges. Orn. 1884, p. 390; id. J. f. O. 1885, p. 115.

♂ *ad.* Above pale cinnamon, fading into sandy buff on the neck; crown with a black irregular subterminal bar to each feather; back, scapulars, wing-coverts, and inner secondaries with a black subterminal bar to each feather, with the broad margins beyond sandy buff; quills, secondaries, and inner primaries cinnamon, passing gradually into dark brown on the outer primaries and the primary-coverts; upper tail-coverts buffish white; tail pale cinnamon, fading into white towards the outer feathers, the middle feathers with blackish centres and a partial subterminal bar, these dark portions gradually fade away towards the outer feathers, where they are finally only represented by a dusky blotch on the inner web near the end of the outer feather. Underparts and sides of the head buff, fading into white on the upper throat; two black collars above and below the crop; the feathers of the lower throat have mostly very narrow dusky shaft-stripes;

under surface of the wing buff, mottled with dusky black on the coverts, and passing into rufous shaded with dark brown towards the outer webs of the larger primaries; bill black, paler towards the base of the lower mandible; legs white. Total length 8 inches, culmen 0·6, wing 5·6, tail 2·8, tarsus 1·85.

♀ *ad.* Similar in plumage. Total length 7 inches, culmen 0·55, wing 5·2, tail 2·5, tarsus 1·9.

Hab. E. Africa, Somali-land and Masai-land.

"Fairly plentiful throughout the plateau, where they were breeding in March and April. They reminded me of the Lapwing in the manner they showed their anxiety when we got near to their eggs."

60. CHETTUSIA CORONATA.

Charadrius coronatus, Gm. S. N. 1788, p. 691.

Pluvier du cap de b. esp., Buff. Pl. Enl. 800.

Chettusia coronata, Finsch & Hartl. Vög. Ostafr. p. 636; Fischer, Zeitschr. ges. Orn. 1884, p. 391 (Masai); Bohm, J. f. O. 1885, p. 51; Fischer, tom. cit. p. 116.

Stephanibya coronata, Salvad. Ann. Mus. Civ. Gen. 1884, p. 220 (Shoa).

Hab. The whole of E. and S. Africa between about 10° N. lat. and 30° S. lat.

"Very plentiful throughout the country, and very noisy at night if in any way disturbed. They were breeding on the plains in March and April. Iris black; base of bill pink, with the end black; legs pink."

61. ÆGIALITES TRICOLLARIS.

Charadrius tricollaris, Vieill. N. D. xxvii. p. 147, pl. 233. fig. 4; Heugl. Orn. N.O.-Afr. p. 1027, pl. 34. fig. 5 (head); Schalow, J. f. O. 1883, p. 340; Finsch & Hartl. Vög. Ostafr. p. 655.

Ægialites tricollaris, Salvad. Ann. Mus. Civ. Gen. 1884, p. 218 (Shoa).

Hab. E., S., and W. Africa: Bogos, Abyssinia, Somali-land, the whole of South Africa, and Senegambia.

"Common, frequenting the streams in the mountains near the coast. Eyelids, base of bill, and legs pink."

62. Podiceps fluviatilis capensis.

Colymbus fluviatilis, Tunstall, Orn. Brit. 1771, p. 3.

Podiceps capensis, Licht. Nomencl. 1854, p. 104; Salvad. Ann. Mus. Civ. Gen. 1884, p. 252 (Shoa).

Podiceps minor, Heugl. Orn. N.O.-Afr. p. 1363; Finsch & Hartl. Vög. Ostafr. p. 811; Bohm, J. f. O. 1885, p. 38.

Hab. The whole of Africa.

This subspecies may be distinguished from the typical *P. fluviatilis* by the secondaries being white, more or less washed with brown towards the ends of the outer webs. It is also rather smaller. The present specimen is apparently exceptionally small. Total length 8 inches, culmen 0·7, wing 3·65, tarsus 1·25.

"Some half dozen were met with in a pan near the middle of the plateau."

XLII.—*A List of the Birds obtained by Mr. Henry Whitely in British Guiana.* By Osbert Salvin, M.A., F.R.S., &c.

[Continued from p. 306.]

249*. Furnarius leucopus.

Furnarius leucopus, Sw. An. in Menag. p. 325; Cab. in Schomb. Guiana, iii. p. 688; Pelz. Ibis, 1881, p. 406.

Originally described from Guianan specimens, but not represented in Mr. Whitely's collection.

250. Lochmias nematura.

Myiothera nematura, Licht. Verz. Doubl. p. 43.

Lochmias nematura, Scl. Cat. Am. B. p. 149.

Kukenam (5000 ft.).

Except that the bill is a little darker and the dark margins of the feathers of the under surface a little wider, the single specimen in Mr. Whitely's collection does not differ from Brazilian examples of *L. nematura*. *L. obscurata*, Cabanis, which ranges from Venezuela to Bolivia, differs in wanting the superciliary stripe. A synonym of the latter bird is *L. sororia,* Scl. & Salv.

251. SCLERURUS CAUDACUTUS.

Thamnophilus caudacutus, Vieill. N. Dict. d'Hist. N. iii. p. 310.

Bartica Grove, Camacusa, Merumé Mountains, River Atapurau.

This is doubtless the true *T. caudacutus* of Vieillot, the Brazilian bird, often so called, being *Myiothera umbretta,* Lichtenstein, and that from the Upper Amazons and Colombia *Sclerurus brunneus,* Sclater. I believe them to be all separable as species.

252. SYNALLAXIS BRUNNEICAUDA.

Synallaxis brunneicauda, Scl. P. Z. S. 1858, pp. 62, 457, 1874, p. 8.

Roraima (3500–5000 ft.).

253. SYNALLAXIS ALBESCENS.

Synallaxis albescens, Temm. Pl. Col. 227. f. 2; Scl. P. Z. S. 1874, p. 9.

Merumé Mountains, Roraima (3500 ft.).

According to Mr. Sclater there are Guianan specimens of this species in the Berlin Museum. May not this be the bird called by Cabanis *S. ruficapilla* (=*S. frontalis*), a species unrepresented in Mr. Whitely's collection?

254. SYNALLAXIS GUIANENSIS.

Motacilla guianensis, Gm. Syst. Nat. i. p. 988.

Synallaxis guianensis, Scl. P. Z. S. 1874, p. 11.

Bartica Grove.

255. SYNALLAXIS ADUSTA.

Synallaxis adusta, Salv. & Godm. Ibis, 1884, p. 450.

Roraima (5000–6000 ft.).

256*. SYNALLAXIS CINNAMOMEA.

Certhia cinnamomea, Gm. Syst. Nat. i. p. 480.

Synallaxis cinnamomea, Scl. P. Z. S. 1874, p. 13.

Synallaxis ruficauda, Cab. in Schomb. Guiana, iii. p. 689.

A common widely-spread species, but not represented in Mr. Whitely's collection.

257. SYNALLAXIS DEMISSA.

Synallaxis demissa, Salv. & Godm. Ibis, 1884, p. 449.

Roraima (5000–6000 ft.).

258. AUTOMOLUS SCLATERI.

Anabates sclateri, Pelz. Sitz. Ak. Wien, xxxiv. p. 132; Orn. Bras. p. 41.

Bartica Grove, Camacusa.

These specimens are rather smaller than those from more typical localities, and they have faint indications of striation on the throat.

259. PHILYDOR PYRRHODES.

Anabates pyrrhodes, Cab. in Schomb. Guiana, iii. p. 689.

Bartica Grove.

260. PHILYDOR TURDINUS.

Anabates turdinus, Pelz. Sitz. Ak. Wien, xxxiv. p. 109; Orn. Bras. p. 41.

Bartica Grove.

Mr. Whitely's specimens agree fairly with a typical example of *Anabates turdinus* in Mr. Sclater's collection, but the head is hardly so rufescent, and in slight contrast with the colour of the back. They certainly more closely resemble this type than a typical example of *A. ochrolæmus,* Tsch., with which I have also compared them.

261. PHILYDOR ERYTHROCERCUS.

Anabates erythrocercus, Pelz. Sitz. Ak. Wien, xxxiv. p. 105; Orn. Bras. p. 39.

Camacusa.

262. PHILYDOR ALBOGULARIS.

Philydor albogularis, Salv. & Godm. Ibis, 1884, p. 450.

Roraima (3500–6000 ft.).

263. XENOPS GENIBARBIS.

Xenops genibarbis, Ill. Prod. p. 213; Scl. Cat. Am. B. p. 159.

Xenops dentirostris, Sw. An. in Menag. p. 353; Cab. in Schomb. Guiana, iii. p. 689.

Bartica Grove, Camacusa, Roraima (3500 ft.).

264. SITTASOMUS OLIVACEUS.

Sittasomus olivaceus, Neuw. Beitr. iii. p. 1146; Scl. & Salv. P. Z. S. 1868, p. 630.

Camacusa, Merumé Mountains, Roraima (3500 ft.).

265. GLYPHORHYNCHUS CUNEATUS.

Dendrocolaptes cuneatus, Licht. Abhandl. Ak. Berl. 1818, p. 204.

Glyphorhynchus cuneatus, Scl. Cat. Am. B. p. 161.

Bartica Grove, Camacusa, Roraima (3500 ft.).

266. DENDROCINCLA FUMIGATA.

Dendrocolaptes fumigatus, Licht. Abhandl. Ak. Berl. 1819, p. 201.

Dendrocincla fumigata, Pelz. Orn. Bras. p. 42.

Bartica Grove, Camacusa, Roraima (3500 ft.).

267. DENDROCINCLA MERULA.

Dendrocolaptes merula, Licht. Abhandl. Ak. Berl. 1819, p. 208.

Dendrocincla merula, Pelz. Orn. Bras. p. 42.

Bartica Grove.

268. DENDROCINCLA LONGICAUDA.

Dendrocincla longicauda, Pelz. Orn. Bras. pp. 42, 60.

Bartica Grove, Merumé Mountains.

269. DENDROCOLAPTES CERTHIA.

Picus certhia, Bodd. Tabl. Pl. Enl. p. 38.

Dendrocolaptes certhia, Scl. & Salv. Nomencl. Av. Neotr. p. 67.

Premnocopus undulatus, Cab. in Schomb. Guiana, iii. p. 689.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

270. DENDROCOLAPTES PLAGOSUS.

Dendrocolaptes plagosus, Salv. & Godm. Ibis, 1883, p. 210.

Camacusa.

271*. DENDROPLEX PICUS.

Oriolus picus, Gm. Syst. Nat. i. p. 384.

Dendroplex picus, Cab. in Schomb. Guiana, iii. p. 690; Scl. Cat. Am. B. p. 165.

Not represented in Mr. Whitely's collection.

272. DENDRORNIS GUTTATOIDES.

Nasica guttatoides, Lafr. Rev. Zool. 1850, p. 587.

Dendrocolaptes guttatus, Cab. in Schomb. Guiana, iii. p. 690 (nec Licht.)?

Bartica Grove.

273. DENDRORNIS PARDALOTUS.

Dendrocopus pardalotus, Vieill. N. Dict. d'Hist. N. xxvi. p. 117.

Dendrornis pardalotus, Scl. Cat. Am. B. p. 164.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

274. DENDRORNIS POLYSTICTA.

Dendrornis polysticta, Salv. & Godm. Ibis, 1883, p. 210.

Bartica Grove.

275. PICOLAPTES ALBOLINEATUS.

Dendrocolaptes albolineatus, Lafr. Rev. Zool. 1846, p. 208.

Picolaptes albolineatus, Lafr. Rev. Zool. 1850, p. 278.

Roraima (3500–5000 ft.), Kukenam.

These specimens agree closely with others from Venezuela and Colombia, showing that the species has a wide range.

276. PICOLAPTES PUNCTICEPS.

Picolaptes puncticeps, Scl. & Salv. Nomencl. Av. Neotr. pp. 69, 160.

Merumé Mountains.

Described from a Guianan skin, with which Mr. Whitely's examples agree exactly.

277. XIPHORHYNCHUS TROCHILIROSTRIS.

Dendrocolaptes trochilirostris, Licht. Abhandl. Ak. Berl. 1818, p. 207, pl. 3.

Xiphorhynchus trochilirostris, Cab. in Schomb. Guiana, iii. p. 690.

Bartica Grove, Camacusa.

278. CYMBILANIUS LINEATUS.

Thamnophilus lineatus, Vieill. N. Dict. d'Hist. N. iii. p. 318.

Cymbilanius lineatus, Scl. P. Z. S. 1858, p. 206.

Bartica Grove, Camacusa.

279. THAMNOPHILUS LUNULATUS.

Lanius lunulatus, Less. Traité d'Orn. p. 375, pl. 45. f. 2 (ex Cuvier).

Thamnophilus fuliginosus, Gould, P. Z. S. 1837, p. 80; Scl. P. Z. S. 1858, p. 208.

Bartica Grove, Camacusa.

280*. THAMNOPHILUS MAJOR.

Thamnophilus major, Vieill., Cab. in Schomb. Guiana, iii. p. 687; Scl. P. Z. S. 1858, p. 209; Pelz. Orn. Bras. p. 75.

Not represented in Mr. Whitely's collection.

281. THAMNOPHILUS NÆVIUS.

Lanius nævius, Gm. Syst. Nat. i. p. 308.

Thamnophilus nævius, Cab. in Schomb. Guiana, iii. p. 687; Scl. Cat. Am. B. p. 173.

Roraima (3500 ft.).

282. THAMNOPHILUS RUFICOLLIS.

Thamnophilus ruficollis, Spix, Av. Bras. ii. p. 27, pl. 37. f. 1; Cab. in Schomb. Guiana, iii. p. 687.

Thamnophilus amazonicus, Scl. P. Z. S. 1858, p. 214, pl. 139.

Bartica Grove, Camacusa.

283. THAMNOPHILUS MURINUS.

Thamnophilus murinus, Scl. P. Z. S. 1867, p. 756; Pelz. Orn. Bras. p. 77.

Bartica Grove, Camacusa, Merumé Mountains.

284*. THAMNOPHILUS ATRICAPILLUS.

Lanius atricapillus, Gm. Syst. Nat. i. p. 303.

Thamnophilus atricapillus, Scl. P. Z. S. 1858, p. 215.

Thamnophilus cirrhatus (Gm.), Cab. in Schomb. Guiana, iii. p. 687.

Not represented in Mr. Whitely's collection.

285. THAMNOPHILUS INSIGNIS.

Thamnophilus insignis, Salv. & Godm. Ibis, 1884, p. 450.

Roraima (5000 ft.).

286*. THAMNOPHILUS DOLIATUS.

Lanius doliatus, Linn. Syst. Nat. i. p. 136.

Thamnophilus doliatus, Cab. in Schomb. Guiana, iii. p. 687; Scl. P. Z. S. 1858, p. 217.

Not represented in Mr. Whitely's collection.

287. DYSITHAMNUS SPODIONOTUS.

Dysithamnus spodionotus, Salv. & Godm. Ibis, 1883, p. 211.

Roraima (3500 ft.).

288. DYSITHAMNUS ARDESIACUS.

Dysithamnus ardesiacus, Scl. & Salv. P. Z. S. 1867, p. 756.

Bartica Grove, Camacusa, Merumé Mountains.

289. THAMNOMANES GLAUCUS.

Thamnomanes glaucus, Cab. Arch. f. Naturg. 1847, i. p. 230, et in Schomb. Guiana, iii. p. 688; Scl. P. Z. S. 1858, p. 223.

Bartica Grove, Camacusa.

290. HERPSILOCHMUS STICTURUS, sp. n.

Cinereus, dorso medio extus nigro intus albo; pileo nigro; superciliis et corpore medio subtus albis; alis nigris, remigibus et tectricibus albo marginatis; cauda nigra, rectricibus duabus mediis in pogonio interno albo bimaculatis, rectricibus reliquis albo terminatis; rostro et pedibus nigricanti-plumbeis: long. tota 3·8, alæ 1·75, caudæ 1·4, tarsi 0·7, rostri a rictu 0·65.

♀ mari similis, sed pileo medio rufescente ornato.

Hab. Bartica Grove et Camacusa, Guiana Brit. (*H. Whitely*).

Mus. nostr. et P. L. S.

Obs. H. pileato ex Brasiliâ affinis, sed dorso nigricantiore et picturâ caudæ certe diversus.

There are several specimens of this species in Mr. Whitely's collection. It may readily be distinguished from *H. pileatus* by the central tail-feathers having two large spots on the inner web instead of a continuous white margin.

291. HERPSILOCHMUS, sp. inc.

Herpsilochmus dorsimaculatus, Pelz. Orn. Bras. pp. 10, 151 (?).

Roraima (3500 ft.).

Count H. v. Berlepsch has kindly sent me a note on this bird, in which he points out certain differences, chiefly in size, between it and the types of *H. dorsimaculatus* with which he has compared Guianan examples. I venture to leave him to describe it, should he think proper, in one of the useful papers on South-American birds with which he from time to time favours this journal.

292. MYRMOTHERULA PYGMÆA.

Muscicapa pygmæa, Gm. Syst. Nat. i. p. 933.

Formicivora pygmæa, Cab. in Schomb. Guiana, iii. p. 688.

Myrmotherula pygmæa, P. Z. S. 1858, p. 234.

Bartica Grove, Camacusa.

293. MYRMOTHERULA SURINAMENSIS.

Sitta surinamensis, Gm. Syst. Nat. i. p. 442.

Myrmotherula surinamensis, Scl. P. Z. S. 1858, p. 234.

Formicivora quadrivittata, Licht., Cab. in Schomb. Guiana, iii. p. 688.

Camacusa.

294. MYRMOTHERULA GUTTATA.

Myrmotherula guttata, Vieill. Gal. Ois. p. 251, pl. 155.

Rhopoterpe guttata, Cab. in Schomb. Guiana, iii. p. 688.

Myrmotherula guttata, Scl. P. Z. S. 1858, p. 235.

Bartica Grove, Camacusa.

295. MYRMOTHERULA GUTTURALIS.

Myrmotherula gutturalis, Scl. & Salv. Ibis, 1881, p. 269.

Bartica Grove, Merumé Mountains, R. Atapurau.

296. MYRMOTHERULA AXILLARIS.

Myrmothera axillaris, Vieill. N. Dict. d'Hist. N. xvii. p. 321.

Formicivora axillaris, Cab. in Schomb. Guiana, iii. p. 688.

Myrmotherula axillaris, Scl. P. Z. S. 1858, p. 236.

Bartica Grove, Camacusa, Merumé Mountains.

297. MYRMOTHERULA LONGIPENNIS.

Myrmotherula longipennis, Pelz. Orn. Bras. pp. 82, 153.

Bartica Grove, Camacusa.

A species closely allied to *M. ménétriési,* d'Orb., as we understand that species. It differs in having the black of the throat more restricted, and in the tail-feathers having white ends. It is also a somewhat larger bird. For the identification of the species we are indebted to Count H. v. Berlepsch, who has compared some of Mr. Whitely's examples with Herr v. Pelzeln's types.

298. MYRMOTHERULA UNICOLOR.

Myrmothera unicolor, Ménétr. Mon. Myioth. p. 480, pl. 2. f. 1.

Bartica Grove, Camacusa, Roraima (3500 ft.).

299. MYRMOTHERULA CINEREIVENTRIS.

Myrmotherula cinereiventris, Scl. & Salv. P. Z. S. 1867, p. 736.

Bartica Grove, Camacusa.

300. FORMICIVORA GRISEA.

Turdus griseus, Bodd. Tabl. d. Pl. Enl. p. 39.

Formicivora grisea, Cab. in Schomb. Guiana, iii. p. 687; Scl. P. Z. S. 1858, p. 238.

Merumé Mountains.

301. TERENURA SPODIOPTILA.

Terenura spodioptila, Scl. & Salv. Ibis, 1881, p. 270, pl. 9. f. 1.

Bartica Grove, Camacusa.

302. RHAMPHOCÆNUS ALBIVENTRIS.

Rhamphocænus albiventris, Scl. Ibis, 1883, p. 95.

Bartica Grove, Camacusa.

303. CERCOMACRA CINERASCENS.

Formicivora cinerascens, Scl. P. Z. S. 1854, p. 112.

Cercomacra cinerascens, Scl. P. Z. S. 1858, p. 245.

Bartica Grove, Camacusa.

304. CERCOMACRA TYRANNINA.

Pyriglena tyrannina, Scl. P. Z. S. 1855, pp. 90, 147, pl. 98.

Cercomacra tyrannina, Scl. P. Z. S. 1858, p. 245.

Bartica Grove, Camacusa, Roraima (3500 ft.).

305. HETEROCNEMIS NÆVIA.

Sitta nævia, Gm. Syst. Nat. i. p. 442.

Heterocnemis nævia, Scl. P. Z. S. 1858, p. 247.

Holocnemis lineata (Gm.), Cab. in Schomb. Guiana, iii. p. 685.

Camacusa.

306. HETEROCNEMIS LEUCOSTIGMA.

Percnostola leucostigma, Pelz. Orn. Bras. pp. 86, 160.

Heterocnemis simplex, Scl. P. Z. S. 1868, p. 573.

Bartica Grove, Camacusa, Merumé Mountains.

Count H. v. Berlepsch tells me that he has compared some of Whitely's specimens (undoubtedly *H. simplex,* Scl.) with the types of *P. leucostigma,* Pelz., and finds they belong to the same species. The latter name has priority.

307. HETEROCNEMIS SATURATA, sp. n.

H. leucostigmati affinis, sed omnino obscurior, corpore subtus quam dorsum vix dilutiore: rostro et pedibus nigricantibus. ♀ subtus quoque paullo obscurior.

Roraima (3500 ft.).

I think this bird must be separated from *H. leucostigma* (vel *simplex*). The under surface of the male is very much darker, instead of being pale ash-colour, and the feet and bill are also blacker.

We have only two specimens, one of each sex, from Mr. Whitely's Roraima collection, where perhaps it replaces the more lowland paler form.

308. MYRMECIZA CINNAMOMEA.

Turdus cinnamomeus, Gm. Syst. Nat. i. p. 825.

Myrmonax cinnamomeus, Cab. in Schomb. Guiana, iii. p. 684.

Myrmeciza cinnamomea, Scl. P. Z. S. 1858, p. 249.

Bartica Grove, Camacusa.

309. MYRMECIZA ATROTHORAX.

Formicarius atrothorax, Bodd. Tabl. d. Pl. Enl. p. 44.

Myrmeciza atrothorax, Scl. Cat. Am. B. p. 187.

Cercomacra atrothorax, Scl. P. Z. S. 1858, p. 245.

Merumé Mountains.

310. HYPOCNEMIS CANTATOR.

Formicarius cantator, Bodd. Tabl. d. Pl. Enl. p. 441.

Hypocnemis cantator, Scl. P. Z. S. 1858, p. 250.

Hypocnemis tintinnabulata (Gm.), Cab. in Schomb. Guiana, iii. p. 684.

Bartica Grove, Camacusa.

311. HYPOCNEMIS PŒCILONOTA.

Hypocnemis pœcilonota, Cab. in Schomb. Guiana, iii. p. 684.

Bartica Grove, Camacusa, R. Atapurau, Roraima (3500 ft.).

This is the true *H. pœcilonota*. The bird from the Upper Amazons frequently called by this name has been separated as *H. lepidonota* (Scl. & Salv. P. Z. S. 1880, p. 160).

312. HYPOCNEMIS LEUCOPHRYS.

Pithys leucophrys, Tsch. Faun. Per. p. 176, pl. 11. f. 2.

Myrmonax leucophrys, Cab. in Schomb. Guiana, iii. p. 684.

Hypocnemis leucophrys, Scl. P. Z. S. 1858, p. 252.

Bartica Grove.

313. HYPOCNEMIS MELANOPOGON.

Hypocnemis melanopogon, Scl. P. Z. S. 1857, p. 130; 1858, p. 253.

Camacusa.

314. PITHYS ALBIFRONS.

Pipra albifrons, Gm. Syst. Nat. i. p. 1000.

Pithys albifrons, Cab. in Schomb. Guiana, iii. p. 685; Scl. P. Z. S. 1858, p. 273.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

315. PITHYS RUFIGULA.

Turdus rufigula, Bodd. Tabl. d. Pl. Enl. p. 39.

Pithys rufigularis, Scl. P. Z. S. 1858, p. 273.

Pithys pectoralis (Lath.), Cab. in Schomb. Guiana, iii. p. 685.

Bartica Grove, Camacusa.

316*. PYRIGLENA FUNEBRIS.

Lanius funebris, Licht. Verz. Doubl. p. 47.

Pyriglena funebris, Cab. in Schomb. Guiana, iii. p. 684.

I have not been able to apply this name of Lichtenstein's to any of Mr. Whitely's Formicariidæ. It was originally proposed for a species from Cayenne said to be allied to *P. leucoptera.*

317. RHOPOTERPE TORQUATA.

Formicarius torquatus, Bodd. Tabl. d. Pl. Enl. p. 43.

Rhopoterpe torquata, Scl. P. Z. S. 1858, p. 275.

Bartica Grove, Camacusa.

318. FORMICARIUS NIGRIFRONS.

Formicarius nigrifrons, Gould, Ann. & Mag. N. H. ser. 2, xv. p. 344; Scl. P. Z. S. 1858, p. 277.

Bartica Grove, Camacusa.

I have only seen specimens of this form from Guiana, and of the true *F. cayennensis* from Brazil. Can Buffon have made an error in ascribing his bird to Cayenne? The evidence before me implies that this was the case.

319. FORMICARIUS HOFFMANNI.

Myrmornis hoffmanni, Cab. J. f. Orn. 1861, p. 95.

Formicarius hoffmanni, Finsch, P. Z. S. 1870, p. 568.

Myiothera analis, Cab. in Schomb. Guiana, iii. p. 686 (nec d'Orb.).

Myrmornis crissalis, Cab. J. f. Orn. 1861, p. 96.

Camacusa.

I agree with Dr. Finsch that *M. crissalis* and *M. hoffmanni* are hardly specifically distinct.

320. CHAMÆZA FULVESCENS.

Chamæza fulvescens, Salv. & Godm. Ibis, 1882, p. 79.

Merumé Mountains, Camacusa, Roraima (3500 ft.).

321. GRALLARIA VARIA.

Formicarius varius, Bodd. Tabl. d. Pl. Enl. p. 44.

Grallaria varia, Scl. Ibis, 1877, p. 442.

Camacusa.

322. GRALLARIA REGULUS.

Grallaria regulus, Scl. P. Z. S. 1860, p. 66; Ibis, 1877, p. 441.

Roraima (5000 ft.).

A single specimen in Mr. Whitely's collection agrees with Andean examples of this species.

323. GRALLARIA BREVICAUDA.

Formicarius brevicauda, Bodd. Tabl. d. Pl. Enl. p. 44.

Grallaria brevicauda, Scl. Ibis, 1877, p. 447.

Colobathris tinniens (Gm.), Cab. in Schomb. Guiana, iii. p. 686.

Bartica Grove, Camacusa.

324. GRALLARIA SIMPLEX.

Grallaria simplex, Salv. & Godm. Ibis, 1884, p. 451.

Roraima (5000 ft.).

325. GRALLARIA MACULARIA.

Pitta macularia, Temm. sub Pl. Col. 217.

Colobathris macularia, Cab. in Schomb. Guiana, iii. p. 685.

Grallaria macularia, Scl. Ibis, 1877, p. 449.

Bartica Grove, Camacusa, Merumé Mountains, R. Atapurau.

326. GRALLARICULA NANA.

Grallaria nana, Lafr. Rev. Zool. 1842, p. 334.

Grallaricula nana, Scl. P. Z. S. 1858, p. 284.

Kukenam (5000 ft.).

327. CORYTHOPIS ANTHOIDES.

Muscicapa anthoides, Puch. Arch. Mus. vii. p. 334.

Corythopis anthoides, Scl. P. Z. S. 1858, p. 288.

Bartica Grove, Camacusa, Merumé Mountains, R. Atapurau, Roraima (3500 ft.).

328. GLAUCIS HIRSUTA.

Trochilus hirsutus, Gm. Syst. Nat. i. p. 490.

Glaucis hirsuta, Salv. & Elliot, Ibis, 1873, p. 276.

Trochilus brasiliensis (Lath.)? et *Trochilus dominicus* (L.), Cab. in Schomb. Guiana, iii. p. 708.

Roraima (3500 ft.).

329. PHAETHORNIS SUPERCILIOSUS.

Trochilus superciliosus, Linn. Syst. Nat. i. p. 189; Cab. in Schomb. Guiana, iii. p. 708.

Phaethornis superciliosus, Gould, Mon. Troch. i. pl. 17; Salv. & Elliot, Ibis, 1873, p. 4.

Bartica Grove, Camacusa, Merumé Mountains, R. Atapurau.

330. PHAETHORNIS AUGUSTI.

Trochilus augusti, Bourc. Ann. d. Sc. Phys. &c. de Lyon, i. p. 623.

Phaethornis augusti, Gould, Mon. Troch. i. pl. 29; Salv. & Elliot, Ibis, 1873, p. 10.

Roraima.

Agrees with Venezuelan and Colombian examples.

331. PHAETHORNIS BOURCIERI.

Trochilus bourcieri, Less. Troch. p. 62, pl. 18.

Phaethornis bourcieri, Gould, Mon. Troch. i. pl. 25; Salv. & Elliot, Ibis, 1873, p. 13.

Camacusa, Merumé Mountains, R. Atapurau, Roraima.

332. PYGMORNIS LONGUEMAREUS.

Trochilus longuemareus, Less. Troch. p. 15, pl. 2; Cab. in Schomb. Guiana, iii. p. 709.

Phaethornis longuemareus, Gould, Mon. Troch. i. pl. 31.

Pygmornis longuemareus, Salv. & Elliot, Ibis, 1873, p. 271.

Bartica Grove, Camacusa, Roraima (3000–3500 ft.).

333*. PYGMORNIS PYGMÆUS.

Trochilus pygmæus, Spix, Cab. in Schomb. Guiana, iii. p. 708.

Phaethornis pygmæus, Gould, Mon. Troch. i. pl. 41; Elliot, Syn. H.-Birds, p. 20.

A recognized Guiana bird, but not represented in Mr. Whitely's collection.

334. CAMPYLOPTERUS LARGIPENNIS.

Trochilus largipennis, Bodd. Tabl. d. Pl. Enl. p. 41.

Campylopterus latipennis (Lath.), Cab. in Schomb. Guiana, iii. p. 709; Gould, Mon. Troch. ii. pl. 48.

Bartica Grove, Camacusa, Merumé Mountains, R. Atapurau.

335. CAMPYLOPTERUS HYPERYTHRUS.

Campylopterus hyperythrus, Cab. in Schomb. Guiana, iii. p. 709.

Roraima (6000 ft.).

Until Mr. Whitely's last collection arrived this species was only known from the type in the Berlin Museum, obtained by Schomburgk at Roraima. The sexes are similar, the female, as usual in this genus, wanting the swollen shafts to the outer primaries.

336. TOPAZA PELLA.

Trochilus pella, Linn. Syst. Nat. i. p. 189; Cab. in Schomb. Guiana, iii. p. 707.

Topaza pella, Gould, Mon. Troch. ii. pl. 66.

Bartica Grove, Camacusa, Merumé Mountains, R. Atapurau.

337. LAMPORNIS VIOLICAUDA.

Trochilus violicauda, Bodd. Tabl. d. Pl. Enl. p. 41.

Trochilus mango, Cab. in Schomb. Guiana, iii. p. 706.

Lampornis mango, Gould, Mon. Troch. ii. pl. 74.

Roraima (3500 ft.).

338*. LAMPORNIS GRAMINEUS.

Lampornis gramineus (Linn.), Gould, Mon. Troch. ii. pl. 77.

Trochilus pectoralis, Lath., Cab. in Schomb. Guiana, iii. p. 706.

A recognized Guianan bird, but not represented in Mr. Whitely's collection.

339. Avocettula recurvirostris.

Trochilus recurvirostris, Sw. Zool. Ill. ii. pl. 105.

Avocettula recurvirostris, Gould, Mon. Troch. iii. pl. 201; Elliot, Syn. H.-Birds, p. 162.

Bartica Grove.

A single female example.

340. Hemistephania johannæ.

Trochilus johannæ, Bourc. P. Z. S. 1847, p. 45.

Doryphera johannæ, Gould, Mon. Troch. ii. pl. 87.

Hemistephania johannæ, Salv. & Godm. Ibis, 1882, p. 80.

Merumé Mountains, Roraima.

These specimens agree very closely with others from Colombia. There is a trifling difference in the colour of the crown of the males, but too slight for formal recognition.

341. Heliodoxa xanthogonys.

Heliodoxa xanthogonys, Salv. & Godm. Ibis, 1882, p. 80.

Merumé Mountains, Roraima (3500 ft.).

342. Thalurania furcata.

Trochilus furcatus, Gm. Syst. Nat. i. p. 486; Cab. in Schomb. Guiana, iii. p. 708.

Thalurania furcata, Gould, Mon. Troch. ii. pl. 101.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3500 ft.).

343. Florisuga mellivora.

Trochilus mellivorus, Linn. Syst. Nat. i. p. 193; Cab. in Schomb. Guiana, iii. p. 706.

Florisuga mellivora, Gould, Mon. Troch. ii. pl. 113.

Merumé Mountains, R. Atapurau.

344. Lophornis ornatus.

Trochilus ornatus, Gm. Syst. Nat. i. p. 497; Cab. in Schomb. Guiana, iii. p. 705.

Lophornis ornatus, Gould, Mon. Troch. iii. pl. 117.

Roraima (3500 ft.).

345. Polemistria pavonina.

Lophornis pavoninus, Salv. & Godm. Ibis, 1882, p. 81.

Merumé Mountains, Roraima (3000–3500 ft.).

Mr. Whitely's last collection contained several specimens of this beautiful bird, including old and young males and females.

346. DISCURA, sp. inc.

Trochilus platurus (Vieill.), Cab. in Schomb. Guiana, iii. p. 709 ?

R. Atapurau.

A female or young male of a species of this genus, but not determinable without the adult male.

Dr. Cabanis includes *T. platurus*, Vieill., = *Discura longicauda* (Gm.), in his list, perhaps referring to the same species.

347. CALLIPHLOX AMETHYSTINA.

Trochilus amethystinus, Gm. Syst. Nat. i. p. 496.

Calliphlox amethystina, Gould, Mon. Troch. iii. pl. 159.

Merumé Mountains, Roraima (3500 ft.).

348. HELIOTHRIX AURITUS.

Trochilus auritus, Gm. Syst. Nat. i. p. 493; Cab. in Schomb. Guiana, iii. p. 707.

Heliothrix auritus, Gould, Mon. Troch. iv. pl. 213.

Bartica Grove, Merumé Mountains, R. Atapurau.

349*. CHRYSOLAMPIS MOSCHITUS.

Trochilus moschitus, L., Cab. in Schomb. Guiana, iii. p. 705.

Chrysolampis moschitus, Gould, Mon. Troch. iii. pl. 204; Elliot, Syn. H.-Birds, p. 176.

A common Guianan bird, but not represented in Mr. Whitely's collection.

350. PETASOPHORA GERMANA.

Trochilus anais, Cab. in Schomb. Guiana, iii. p. 707.

Petasophora germana, Salv. & Godm. Ibis, 1884, p. 451.

Roraima (5000–6000 ft.).

351. PETASOPHORA DELPHINÆ.

Ornismya delphinæ, Less. Rev. Zool. 1839, p. 44.

Petasophora delphinæ, Gould, Mon. Troch. iv. pl. 229.

Merumé Mountains, Roraima (3000–5500 ft.).

352. CHRYSOBRONCHUS VIRESCENS.

Trochilus virescens, Dumont, Dict. Sc. Nat. x. p. 49.

Chrysobronchus virescens, Gould, Mon. Troch. iv. pl. 230.

Trochilus viridis (Vieill.), Cab. in Schomb. Guiana, iii. p. 707.

Roraima (3500 ft.).

353. CHRYSOBRONCHUS VIRIDISSIMUS.

Trochilus viridissimus, Vieill. Ois. Dor. i. p. 84, pl. 42.

Chrysobronchus viridicaudus, Gould, Mon. Troch. iv. pl. 231.

Bartica Grove, Merumé Mountains.

354. HELIOMASTER LONGIROSTRIS.

Trochilus longirostris, Vieill. Ois. Dor. i. p. 107, pl. 59.

Heliomaster longirostris, Gould, Mon. Troch. iv. pl. 259.

Merumé Mountains, Roraima (3500 ft.).

355. AGYRTRIA TOBACI.

Trochilus tobaci, Gm. Syst. Nat. i. p. 498.

Thaumatias tobaci, Elliot, Ibis, 1878, p. 49.

Thaumatias linnæi, Gould, Mon. Troch. v. pl. 302.

Bartica Grove, Merumé Mountains, Roraima (3500 ft.).

356*. AGYRTRIA LEUCOGASTER.

Trochilus leucogaster (Lath.), Cab. in Schomb. Guiana, iii. p. 705.

Agyrtria leucogaster, Elliot, Syn. H.-Birds, p. 202.

A recognized Guiana bird, but not represented in Mr. Whitely's collection.

357. AMAZILIA CUPREICAUDA.

Amazilia cupreicauda, Salv. & Godm. Ibis, 1884, p. 452.

Merumé Mountains, Roraima (3500 ft.).

Many specimens, all agreeing with one another as regards their specific characters.

358. EUCEPHALA CÆRULEA.

Trochilus cæruleus, Vieill. Ois. Dor. i. p. 82, pl. 40.

Eucephala cærulea, Gould, Mon. Troch. v. pl. 330.

Bartica Grove.

359. HYLOCHARIS CYANEA.

Trochilus cyanus, Vieill. Enc. Méth. 558.

Hylocharis cyaneus, Gould, Mon. Troch. v. pl. 344.

Merumé Mountains, Camacusa, R. Atapurau, Roraima (3500 ft.).

360. HYLOCHARIS SAPPHIRINA.

Trochilus sapphirinus, Gm. Syst. Nat. i. p. 496; Cab. in Schomb. Guiana, iii. p. 706.

Hylocharis sapphirina, Gould, Mon. Troch. v. pl. 342.

Bartica Grove, Camacusa, Merumé Mountains, Roraima (3000 ft.).

361. CHLOROSTILBON PRASINUS.

Ornismya prasina, Less. Ois-Mouches, pl. 65.

Chlorostilbon prasinus, Elliot, Ibis, 1875, p. 163.

Roraima (3500–4000 ft.).

Besides the species of Trochilidæ mentioned above as included in Prof. Cabanis's list of Schomburgk's birds, the following are also mentioned, but their occurrence in Guiana requires confirmation, viz. :—

Trochilus rubineus = *Clytolæma rubinea,* Brazil.
„ *rivolii* = *Lamprolæma rhami,* Mexico and Guatemala.
„ *brevirostris* = *Agyrtria brevirostris,* Brazil.
„ *auriculatus* = *Heliothrix auriculatus,* Brazil.
„ *petasophorus* = *Petasophora serrirostris,* Brazil.
„ *bicolor* = *Thalurania wagleri,* Brazil.

362. PANYPTILA CAYENNENSIS.

Hirundo cayennensis, Gm. Syst. Nat. i. p. 1024.

Panyptila cayennensis, Scl. P. Z. S. 1865, p. 607.

Merumé Mountains.

Mr. Whitely procured one specimen of this Swift, the range of which extends over a large portion of South America from Panama to South Brazil.

363. CHÆTURA ZONARIS.

Hirundo zonaris, Shaw, in Mill. Cim. Phys. pl. 55.

Chætura zonaris, Scl. P. Z. S. 1865, p. 609.

Acanthylis collaris (Neuw.), Cab. in Schomb. Guiana, iii. p. 709.

Roraima (3500 ft.).

Mr. Whitely's specimens are much smaller than the usual size of this species, the wings measuring only 7·4 inches instead of 8·1 inches. They may be referable to the bird from Colombia recently described by Mr. Lawrence as *Hemiprocne minor,* or in part at least to *H. albicincta,* Cab. (J. f. Orn. 1862, p. 164). But are these small birds specifically distinct?

364. CHÆTURA CINEREIVENTRIS.

Chætura cinereiventris, Scl. P. Z. S. 1863, p. 101, pl. 14. f. 1, 1865, p. 612.

Merumé Mountains, R. Atapurau, Roraima (3500 ft.).

365. CHÆTURA SPINICAUDA.

Cypselus spinicaudus, Temm. Tabl. Méth. p. 78.

Chætura spinicauda, Scl. P Z. S. 1865, p. 612.

Bartica Grove, Camacusa.

366. CHÆTURA RUTILA.

Hirundo rutila, Vieill. N. Dict. d'Hist. Nat. xiv. p. 528.

Chætura rutila, Salv. & Godm. Ibis, 1882, p. 82.

Merumé Mountains.

Most probably the true *H. rutila,* Vieillot, as distinguished from *Chætura brunneitorques,* Lafr., of the Northern Andes and Central America.

367. NYCTIBIUS GRANDIS.

Caprimulgus grandis, Gm. Syst. Nat. i. p. 1029.

Nyctibius grandis, Cab. in Schomb. Guiana, iii. p. 711; Scl. P. Z. S. 1866, p. 128.

Camacusa.

368. NYCTIBIUS LONGICAUDATUS.

Caprimulgus longicaudatus, Spix, Av. Bras. ii. p. 1, pl. 1.

Nyctibius grandis, Scl. P. Z. S. 1866, p. 128.

Bartica Grove.

369. NYCTIBIUS JAMAICENSIS.

Caprimulgus jamaicensis, Gm. Syst. Nat. i. p. 1029.

Nyctibius jamaicensis, Scl. P. Z. S. 1866, p. 129.

Bartica Grove, Roraima (3700 ft.).

370*. NYCTIBIUS BRACTEATUS.

Nyctibius bracteatus, Gould, P. Z. S. 1846, p. 1; Scl. & Salv. Ex. Orn. p. 39, pl. 20.

Nyctibius rufus, Cab. in Schomb. Guiana, iii. p. 711.

Not represented in Mr. Whitely's collection. We now have beautiful specimens of this rare species obtained by Mr. C. Buckley at Sarayacu in Eastern Ecuador.

371*. PODAGER NACUNDA.

Caprimulgus nacunda, Vieill. N. Dict. d'Hist. N. x. p. 240.

Podager nacunda, Cab. in Schomb. Guiana, iii. p. 711.

Not represented in Mr. Whitely's collection.

372. LUROCALIS SEMITORQUATUS.

Caprimulgus semitorquatus, Gm. Syst. Nat. i. p. 1031.

Lurocalis semitorquatus, Scl. P. Z. S. 1866, p. 132.

Bartica Grove.

373. ANTROSTOMUS NIGRESCENS.

Caprimulgus nigrescens, Cab. in Schomb. Guiana, iii. p. 710.

Antrostomus nigrescens, Scl. P. Z. S. 1866, p. 138.

Bartica Grove, Camacusa.

374. ANTROSTOMUS WHITELYI, sp. n.

Supra nigricans, rufo maculatus et tectricibus alarum sparse albo notatis; subtus mento et pectore nigris fulvo vix fasciatis, gula alba, abdomine toto nigricante et sordide albo intermixto, valde indistincte transfasciato; remigum 1^{i} et 2^{i} pogoniis ambobus fascia alba, rachide interrupta, notatis; caudæ rectricibus 2^{a} et 3^{a} in pogonio interno tantum albo terminatis: long. tota 8·5, alæ 6·3, caudæ 4·0.

♀ mari similis, sed remigibus 1^{o}, 2^{o} et 3^{o} in pogonio interno fascia fulva notatis, caudæ maculis albis vix ullis.

Hab. Roraima (3500 ft.), Guiana Brit. (*H. Whitely*).

Obs. A. nigrescenti proximus, sed major, et abdomine minus distincte transfasciato, remigibus et cauda aliter albo picturatis, certe distinguendus.

There are two specimens of this species in Mr. Whitely's collection, one of each sex. The spots on the tail in *A. nigrescens* are terminal and embrace both webs; in this species one web only is involved. The outer quill of the wings has a white bar, the same quill in *A. nigrescens* being wholly black.

375. STENOPSIS CAYENNENSIS.

Caprimulgus cayennensis, Gm. Syst. Nat. i. p. 1031; Cab. in Schomb. Guiana, iii. p. 710.

Stenopsis cayennensis, Scl. P. Z. S. 1866, p. 140.

Merumé Mountains, Roraima (3500–4000 ft.).

376. STENOPSIS RUFICERVIX.

Stenopsis ruficervix, Scl. P. Z. S. 1866, p. 140, pl. 14.

Caprimulgus decussatus, Cab. in Schomb. Guiana, iii. p. 710 (nec Tsch.).

Roraima (5000 ft.).

It is most probably this species to which Prof. Cabanis refers under the name *C. decussatus*, Tsch.

377. HYDROPSALIS SCHOMBURGKI.

Hydropsalis schomburgki, Gray, Scl. P. Z. S. 1866, p. 142.

Hydropsalis furcifer, Vieill., Cab. in Schomb. Guiana, iii. p. 711?

Camacusa.

A female belonging apparently to this species.

378. NYCTIDROMUS ALBICOLLIS.

Caprimulgus albicollis, Gm. Syst. Nat. i. p. 1039; Cab. in Schomb. Guiana, iii. p. 710.

Nyctidromus albicollis, Scl. P. Z. S. 1866, p. 144.

Bartica Grove.

379. STEATORNIS CARIPENSIS.

Steatornis caripensis, Humboldt, Rec. d'Obs. Zool. ii. p. 141; id. Nouv. Ann. Mus. 1834, p. 321; Scl. P. Z. S. 1866, p. 130.

Roraima.

A single specimen, of which Mr. Whitely says:—"This bird was brought to me alive yesterday (Oct. 2, 1883). It had come down from some crevice in the vertical rocks of Roraima."

XLIII.—*Notices of recent Ornithological Publications.*

[Continued from p. 327.]

112. '*The Auk.*'

['The Auk,' a Quarterly Journal of Ornithology. Continuation of the 'Bulletin of the Nuttall Ornithological Club.' Vol. II. No. 2, April; No. 3, July, 1885. Boston, Mass.]

Mr. J. A. Allen contributes an important paper on "Sexual Selection and the Nesting of Birds" to the April number of our contemporary; and amongst other interesting papers on American birds is one by Mr. Beckham on 91 species obtained at Pueblo, Colorado. Mr. Ridgway makes remarks upon a fine series of that hitherto rare species, the Californian Vulture; he has also a paper on the Brown Condor, *Sarcorhamphus æquatorialis*, Sharpe, and regards it as the young of *S. gryphus*, which certainly retains its immature plumage until at least seven years old. Dr. Shufeldt describes and figures four stages of development in the bill of the Short-tailed Albatross (*Diomedea brachyura*), from specimens sent in alcohol from Alaska. The "Analecta Ornithologica" of Dr. Stejneger reach their fifth series. A paper by Mr. Brewster on a new species of Rock-Ptarmigan (*Lagopus welchi*) from Newfoundland, and one by Dr. Merriam on change of colour in the wing-feathers of the Willow-Grouse of Newfoundland, will be read with interest by the side of the remarks on the Iceland Ptarmigan in our present issue (*suprà*, p. 377). Mr. John Murdoch's critical notes on some species of birds attributed to Point Barrow, Alaska, by Mr. E. W. Nelson have called forth a rejoinder in the July issue. The papers in the latter relate principally to birds of the United States and Territories; but there is one which cannot be summarily disposed of, bearing, as it does, the heading "The Eggs of the Knot (*Tringa canutus*) found at last." Lieut. A. W. Greely, U.S.A., commander of the late unfortunate expedition to Lady Franklin Sound, writes to our friend Dr. C. H. Merriam:—"The specimens of bird and egg were obtained in the vicinity of Fort Conger, latitude 81° 44′ N. The egg was 1·1 inch in the longer axis and 1 inch in the shorter. Colour light pea-green, closely spotted with brown in small specks about the size of a pin-head." It will be remembered that Major H. W. Feilden, the naturalist to H.M.S. 'Alert,' obtained the three nestlings now in the British Museum of Natural History, but the eggs eluded his research. Even now it is by no means clear that any identified specimens have been brought back; and if not, we are no better off than we were in the days of Parry, more than sixty years ago, for that the eggs were then *obtained* there can be no reasonable doubt. They were even described, after a fashion: some were probably brought home; but the question still is, Where is a genuine Knot's egg to be seen?—and Echo makes her proverbial answer.

113. *Blomefield 'Reminiscences of Yarrell.'*

[Reminiscences of William Yarrell. By Leonard Blomefield (late Jenyns). 8vo. Bath: 1885. (For private circulation.)]

Of the many who are acquainted with the works of the Rev. Leonard Jenyns, and are accustomed to look upon his 'Manual of British Vertebrate Animals' as a classic, comparatively few are aware that under the name of Blomefield we have still the pleasure of counting him among the four or five surviving original members of the Zoological Society. In the present pamphlet he has given us a slight but pleasant sketch of Yarrell, with whom he was intimately acquainted for nearly thirty years, and in whose company he made many excursions. One of the best of his reminiscences is that of the shepherd-boy whom the two friends found on the downs above Eastbourne, and who imagined that the sole purpose for which Parliament met was to determine the exact day when Wheatear-catching should begin!

114. *British Association's Report on Migration in* 1884.

[Report on the Migration of Birds in the Spring and Autumn of 1884. By Mr. J. A. Harvie-Brown, Mr. Cordeaux, Mr. R. M. Barrington, Mr. A. G. More, and Mr. W. Eagle Clarke. 8vo. London: 1885.]

To this Report a useful sketch-map is prefixed, showing the stations marked in red; and in addition to the informations from the stations, some interesting "Ocean Notes" are supplied by the officers of various steamers and by Capt. D. Gray of the whaler 'Eclipse' of Peterhead. A little more system might be shown in the arrangement of the Reports under Families, Genera, and Species. For instance, at p. 20 we find *Phylloscopinæ* followed by a paragraph headed "Titmice"—why not *Paridæ*? At p. 22, *Motacillidæ* are succeeded by "Pipits"; *Corvidæ* are divorced from "Ravens," which are separated from *Sturninæ* by the insertion of *Cypselidæ*; "Larks" precede *Emberizidæ*, which, again, are pages away from *Fringillidæ* and next to *Cuculidæ*! Such errors as Motacill*a*dæ, Muscicap*a*dæ, Charadri*a*dæ, seem to show a want of attention to detail; and we have not gone over the Report hypercritically.

115. *Buckley on the Birds of Rousay, Orkney Islands.*

[A few Notes on the Mammals and Birds of Rousay, one of the Orkney Islands. By T. E. Buckley, B.A., F.Z.S. Tr. Nat. Hist. Soc. Glasgow, i. (N. S.) 1885, pp. 44–76.]

As the author justly remarks, the Orkneys seem to be the district of Scotland to which the least attention has been paid, from a zoological point of view, of late years; no Gray or Saxby having arisen to do for them what these and other naturalists have done for the Hebrides and the Shetlands. Even in Scotland little appears to be known about this group, for the Edinburgh 'Scotsman,' in its record of Grouse-shooting, has of late more than once informed us that the Orkneys in general, and Kirkwall in particular, are in the *Shetlands*, where, as it happens, there are no Grouse at all! The more welcome are these notes on Rousay; and, as an instance of their value, it may be mentioned that in them the record occurs, apparently for the first time, of the authenticated occurrence in summer of the Black-throated Diver (*Colymbus arcticus*), the partial distribution of which has always been a puzzle. The species has not yet been recorded from the Shetland Islands.

116. *Bunge on Birds of the Delta of the Lena.*

[Naturhistorische Beobachtungen und Fahrten im Lena Delta. Von Dr. Alex. Bunge. Aus Briefen an den Akademiker L. v. Schrenck. Mélanges Biol., Bull. Acad. Imp. Sc. St. Pétersbourg, xii. i. pp. 31–107.]

The greater part of this interesting paper is devoted to mammoth-remains found at the mouth of the Lena; but about eighteen pages refer to the birds observed, in order of date, on an expedition to Sagastyr Island. All three Palæarctic species of Swan (*C. musicus, C. bewicki,* and *C. olor*) were found there in the breeding-season; and authenticated eggs of the Grey Plover and of the Little Stint were obtained, but not those of the Sanderling and the Curlew-Sandpiper, although these birds were shot. Sabine's Gull was procured, and was probably breeding; but the greatest prize of all was a pair of Ross's Rosy-breasted Gull (*Rhodostethia rosea*), shot on the 8th July out of a flock of other Gulls of three or four species.

117. *Cory's 'List of the Birds of the West Indies.'*

[A List of the Birds of the West Indies, including the Bahama Islands and the Greater and Lesser Antilles, excepting the Islands of Tobago and Trinidad. By Charles B. Cory. 4to. Boston: 1885.]

Mr. Cory's list contains the names, in systematic order, of the birds that are, up to the present time, known to occur in the West Indies, the islands in which each species occurs being added. Great progress, certainly, has been made of late years in our knowledge of Antillean ornithology, but very much more remains to be done. As shown by the recent discoveries in Cozumel (*suprà,* pp. 185, 321), even the most unlikely islets may be found to possess peculiar species.

118. *Dubois on Belgian Birds.*

[Revue des Oiseaux Observés en Belgique; par M. Alph. Dubois. Bull. Mus. R. d'Hist. Nat. Belgique, iv. 1885. (Separate copy.)]

This list is in reply to an invitation from the Belgian delegates of the International Ornithological Committee inaugurated last year at Vienna. Altogether the species mentioned amount to 336, of which 70 are resident, 57 summer and 39 winter visitors, 49 are of regular passage, 105 irregular or stragglers, and 16 are regarded as "variétés climatériques." The dates of arrival and departure, the Flemish names of the species, and other particulars render this a very useful and interesting compilation.

119. *Dybowski and Taczanowski on the Birds of Kamtschatka.*

[Liste des Oiseaux du Kamtschatka et des îles Comandores. Par le Dr. B. Dybowski and L. Taczanowski. Bull. Soc. Zool. France, 1884, pp. 145–161.]

The field-notes by Dr. Dybowski have already been noticed (Ibis, 1884, p. 207), and we have now a complete list of the species of which he collected specimens (161 in number), followed by remarks on and descriptions of some of the more interesting, together with some rectifications of former statements.

120. *H. O. Forbes on the Eastern Archipelago.*

[A Naturalist's Wanderings in the Eastern Archipelago, a Narrative of Travel and Exploration from 1878 to 1883. By Henry O. Forbes, F.R.G.S. London: 1885.]

Members of the B. O. U. will, we are sure, all enjoy Mr. Forbes's account of his wanderings in the Eastern Archipelago, in the course of which he explored the Cocos-Keeling Islands, Java, Sumatra, Timor-Laut, Buru, and Timor, and devotes a section of his work to each of these localities. Numerous allusions to birds observed will be found throughout the volume, and the various appendices contain lists of the avifaunas of the Cocos-Keeling Islands, Sumatra, Timor-Laut, and Buru, which will be very useful for reference. We may also call special attention to Mr. Forbes's account of the habits of *Buceros galeatus* (p. 154) as novel and interesting, to his notice of the rare birds met with at the summit of Mount Dempo in Sumatra (pp. 207–209), and to his general remarks on the birds of Timor-Laut (p. 337). The

Honey-eater (*Myzomela annabellæ*) named after Mrs. Forbes worthily occupies the coloured titlepage, and an uncoloured figure of *Geocichla machiki* (p. 337) is also given.

121. *Harvie-Brown on Kumlien's Gull.*

[Exhibition of and Remarks upon a specimen of *Larus kumlieni*, Brewster, from Cumberland Inlet, North America, &c. Pr. R. Phys. Soc. Edin. 1885. (Separate copy.)]

This very interesting specimen, which has been kindly presented by Mr. Harvie Brown to Saunders, was shot in August 1884 by Mr. John Henderson, attached to the steam-whaler 'Maude,' of Dundee, other examples being observed. The species was first recorded from Cumberland Inlet by Mr. Kumlien, of the Howgate Polar Expedition, as the North-Pacific *L. glaucescens*, a statement which (accompanied by others still more improbable had hardly had time to raise Sunders's scepticism when the point was cleared up by his friend Mr. Brewster, who pronounced the species from Cumberland Inlet to be quite distinct, as it undoubtedly is. The bird is only of the size of the Iceland Gull, but it has pale-grey markings on the primaries—a distinction worthy of notice, because the species may not improbably occur on our northern coasts in severe winters, having already been obtained as far south as New York State. On the Pacific coast a Gull, similar in wing-pattern, but of the size of the Glaucous Gull, has been obtained, and named *L. nelsoni*, Henshaw. Mr. Henderson is to be congratulated on the acquisition of this rarity; would that there were more observers like him on our whalers!

122. *Meyer on new Birds in the Dresden Museum.*

[Ueber neue und ungenügend bekannte Vögel im königl. zoologischen Museum zu Dresden. Von A. B. Meyer. Zeitschr. f. d. ges. Orn. 1884, pp. 193–222, taf. vii.–ix.]

After referring to his previous paper [see 'Ibis,' 1884, p. 458], Dr. Meyer enumerates 37 species, and proceeds to describe the following as new:—*Sauropatis australasiæ* (V.), var. n. *minor,* Timor-Laut ; *Leptotodus,* gen. n., type *L. tenuis,* sp. n. (figured), Amberbaki, New Guinea; *Microlestes,* gen. n., type *M. arfakianus,* sp. n., Arfak Mountains, New Guinea; *Gerygone bimaculata,* sp. n., Arfak Mountains, New Guinea; *Graucalus timorlaoënsis,* sp. n. (figured), Timor Laut; *Corvus latirostris,* sp. n., Timor Laut; *Pachycephala affinis,* sp. n., Arfak Mountains ; *Oxypogon stuebelii,* sp. n., Volcano of Tolima, Colombia; *Chlorostilbon stuebelii,* sp. n., Yungas, Bolivia; *Cinnyris henkei,* sp. n. (figured), coll. Frank; *Zosterops incerta,* sp. n. (locality unknown) ; *Turdinus sepiarius* (Horsf.), var. n. *minor,* Java; *Geocichla schistacea,* sp. n. (figured), Timor Laut; *Macropygia timorlaoënsis,* sp. n., Timor Laut ; *Tropidorhynchus aruensis,* sp. n., Aru Islands; *Stigmatops salvadorii,* Timor Laut, and *S. kebirensis,* Kebir, spp. nn.

123. *Mitchell's 'Birds of Lancashire.'*

[The Birds of Lancashire. By F. S. Mitchell. 8vo. London: 1885.]

This is an excellent book, and, in its way, almost perfect —which is saying a good deal. The introductory remarks, especially those on the value of observations on migration, deserve careful consideration at the present time, when there is a distinct tendency to the mere accumulation of a mass of undigested facts—a proceeding which must end in weariness. A map, coloured plates by Keulemans of those Lancashire rarities the Black-throated Wheatear (*Saxicola stapazina*) and the Wall-creeper (*Tichodroma muraria*), and woodcuts of decoys &c. embellish the work. Worthy of notice, as a fact not generally known, is the remarkable decrease of late years in the numbers of the Green Woodpecker and of the Wryneck—the latter seldom breeding in Lancashire now, although it appears to have been a regular visitor there up to about the middle of the century.

124. *More on Irish Birds.*

[A List of Irish Birds, showing the Species contained in the Science and Art Museum, Dublin. By A. G. More, F.L.S., M.R.I.A., Curator of the Natural-History Museum, Dublin, 1885, pp. 32.]

In this useful list all the species obtained in Ireland are enumerated, those in the Museum being distinguished by Egyptian type, while those not possessed are in italics. It must not be forgotten that some of the rarer stragglers to Ireland, such as the Griffon-Vulture, Spotted Eagle, Great Spotted Cuckoo, Yellow-billed Cuckoo, Great Auk, and others, are in the Museum of Trinity College, Dublin, and that there is no reason for their transfer to the Museum in Kildare Street. But surely the latter should not long remain without one or more of the Irish specimens of Montagu's Harrier, Red-backed Shrike, Marsh-Tit, White Wagtail, Wood-Lark, Mealy Redpole, Stock-Dove, &c. which have been obtained of late years, and which are neither heirlooms nor have been lost sight of in the course of the change of ownership incidental to so many local collections.

125. *Nehrkorn on Birds from Waigiou.*

[Zur Avifauna der Insel Waigou. Von A. Nehrkorn. J. f. O. 1885, p. 30.]

In the winter of 1883–84 the well-known collector Dr. Platen paid a visit to Waigiou, and amassed a series of 636 bird-skins. The species, 103 in number, are given according to Salvadori's nomenclature; and of these, 22 are new to Waigiou. The eggs of several species are described, amongst others those of *Rhectes leucorhynchus* and *Pitta mackloti*. Of *Diphyllodes wilsoni*, formerly considered so rare, 40 adult males, 10 young males, and 4 females were in the collection!

126. *'Ornithologist and Oologist.'*

[Ornithologist and Oologist. Vol. x. No. 5.]

The recent number of this periodical, published by Mr. Frank B. Webster at Pawtucket, Rhode Island, contains many interesting notes on American birds.

127. *Reid on the Birds of Bermuda.*

[The Birds of Bermuda. By Capt. Savile G. Reid, R.E., F.Z.S. Bull. U.S. Nat. Mus. No. 25, pp. 163-279.]

Most of these excellent notes have already appeared in the 'Zoologist' for 1877; but a complete synonymy is now supplied to each of the 186 species recorded as occurring in this group of islands; and *Dendrœca maculosa, Regulus satrapa,* and *Hydrochelidon nigra* are added to the list, together with some additional matter. Our American cousins have acted wisely in annexing these notes on "the still vexed Bermoothes," albeit the islands remain as yet a British possession.

128–142. *Ridgway on American Birds.*

[128. Description of a new Race of the Red-shouldered Hawk from Florida. Pr. U.S. Nat. Mus. 1884, p. 514. (Published Jan. 19, 1885.)

129. On two hitherto unnamed Sparrows from the Coast of California. *Tom. cit.* p. 516. (Published Jan. 19, 1885.)

130. On *Œstrelata fisheri* and *Œ. defilippiana. Op. cit.* 1885, p. 17.

131. *Icterus cucullatus,* Swainson, and its Geographical Variations. *Tom. cit.* p. 18.

132. Description of a new Species of *Contopus* from Tropical America. *Tom. cit.* p. 21.

133. Note on *Anser leucopareius* of Brandt. *Tom. cit.* p. 21.

134. Description of a new Warbler from Yucatan. *Tom. cit.* p. 23.

135. Description of two new Birds from Costa Rica. *Tom. cit.* p. 23.

136. Description of three supposed new Honey Creepers from the Lesser Antilles, with a Synopsis of the Species of the Genus *Certhiola. Tom. cit.* p. 25.

137. On *Cathartes burrovianus,* Cassin, and *C. urubitinga,* Pelzeln. *Tom. cit.* p. 34.

138. On *Onychotes gruberi. Tom. cit.* p. 36.

139. Remarks on the type specimen of *Buteo oxypterus,* Cassin. *Tom. cit.* p. 75.

140. Description of a new Species of Boat-billed Heron from Central America. *Tom. cit.* p. 93.

141. Description of a new Hawk from Cozumel. *Tom. cit.* p. 94.

142. On *Peucæa mexicana* (Lawr.), a Sparrow new to the United States. *Tom. cit.* p. 98.]

We have here a batch of fifteen papers by our energetic Foreign Member Mr. Ridgway. In No. 128 he describes the Floridan form of *Buteo lineatus* as a new subspecies, *B. lineatus alleni*; it is smaller than typical *B. lineatus,* the adult much paler in colour, the young decidedly darker. In

No. 129 a new Sparrow, *Passerculus beldingi*, sp. nov., from Southern California, is described as similar to the darker form of *P. sandwichensis* from the salt-marshes of San Francisco (for which he proposes the name *P. sandwichensis bryanti*, subsp. nov.), but is again much darker and has a larger bill. It seems that *Passerculus anthinus* of Bonaparte, from Alaska, is a pure synonym of his *P. alaudinus*. In No. 130 Mr. Ridgway announces the discovery of a specimen of the Petrel *Œstrelata defilippiana* in the American Museum of Natural History, New York, and shows that it is "very distinct" from *Œ. fisheri*, with which he had previously supposed it might be identical. In No. 131 he proposes to separate from *Icterus cucullatus* two new subspecies—(1) the paler *I. c. nelsoni* from Western Mexico, Southern California, and Arizona, (2) the ruddier *I. c. igneus*, from Yucatan, leaving the intermediate form from Southern and Eastern Mexico as *I. cucullatus*. According to No. 132 *Contopus pileatus*, sp. n., is a small member of the genus with a "sooty grey cap," based on a single specimen, from an unknown locality, in the American Museum of Natural History, New York. In No. 133 the specific name "*minima*" is proposed for the small form of Canada Goose from the Pacific coast called *Bernicla canadensis leucopareia* in the lately-issued 'Water-Birds of North America,' i. p. 456, because *Anser leucopareius*, Brandt = *A. hutchinsi*, Sw. et Richards. In No. 134 the form of *Granatellus sallæi* from Yucatan is separated subspecifically as *G. sallæi boucardi*. In No. 135 Mr. Ridgway describes a new Blue Crow allied to *Cyanocorax ornatus*, from the Atlantic slope of Costa Rica, under the name of *C. cucullatus*, and a new subspecies of *Vireolanius*, from Costa Rica to Panama, as *V. pulchellus verticalis*. The latter differs from the northern form in having the whole crown light green. In No. 136 he describes *Certhiola finschi*, from an uncertain locality, as like *C. martinicana*, but smaller and with yellow superciliaries; *C. sundevalli*, like *C. dominicana*, but with yellow superciliaries and the upper parts more slaty, from Guadeloupe and Dominica; and *C. sancti-thomæ*, from St. Thomas. He adds a new and useful "key" to the genus, in which 19 species are recognized, the principal synonyms being added.

In No. 137 Mr. Ridgway shows that *Cathartes burrovianus* of Cassin is the same as *C. urubitinga* of Pelzeln (ex Natterer), Cassin's name having the priority. In No. 138 we learn that Mr. Ridgway has solved the long-existing puzzle of *Onychotes gruberi*, by proving that this supposed Californian species (see Ibis, 1881, p. 396, pl. xii.) is no other than *Buteo solitarius* of the Sandwich Islands. He states in No. 139 that, although smaller than any example in the National Museum, *B. oxypterus* is unquestionably referable to *B. swainsoni*. But the specimen described in 'North-American Birds' (iii. p. 266) as the melanistic adult of "*B. swainsoni*, var. *oxypterus*," is not *B. swainsoni* at all, but *B. fuliginosus*, Scl., "which is said (and probably with truth) to be the melanistic phase of *B. brachyurus*." In No. 140 the Boat-billed Heron of Central America, from Mexico to Veragua, is separated as a new species, *Cancroma zeledoni*, differing from *C. cochlearia* in having the neck and breast deep buff instead of ashy white, the upper parts of a deeper grey, and the crest far less developed. In No. 141 *Rupornis gracilis*, as it is proposed to call the new species from Cozumel, is described as similar to *R. ruficauda griseicauda*, but decidedly smaller, and with the thighs and under wing-coverts nearly or quite immaculate. Lastly, the specimens of *Peucæa* from Texas referred to *P. arizonæ* by Messrs. Ridgway and Merrill in their joint article on the ornithology of Southern Texas (Proc. U.S. Nat. Mus. i. p. 127) turn out to be the same as *Coturniculus mexicanus*, Lawrence (Ann. Lyc. N. Y. viii. p. 474), from the mountains of Colima. The species must therefore stand as *Peucæa mexicana*.

143. *Salvadori and Giglioli on new Birds from Cochin China.*

[Due nuove specie di Uccelli della Cocincina raccolte durante il viaggio della R. Pirofregata Magenta e descritte da T. Salvadori ed E. Giglioli. Atti R. Accad. Sci. Torino, xx. p. 427.]

An apparently very conspicuous new species of *Cissa* (*C. hypoleuca*) and a new *Mirafra* (*M. erythrocephala*) are described from specimens collected in Cochin China in 1846, during the voyage of the 'Magenta' round the world.

144. *Schalow on the Birds of Mark Brandenburg.*

[Zur Ornis der Mark Brandenburg. Ein dritter Beitrag. Von Herman Schalow. Zeitschr. f. d. ges. Orn. 1885, pp. 1–44.]

This is the third paper which Herr Schalow has published upon the subject, the two former having appeared in the 'Journal für Ornithologie' for the years 1876 and 1881 respectively. The number of species observed has increased during the past nine years from 259 to 267. Any British ornithologist who is desirous of investigating the avifauna of the district between the Elbe and the Oder will find that, in addition to other information, this contribution affords him an excellent opportunity of acquiring at least so much of the little-known Wendish language as relates to birds.

145. *Schiavuzzi on Northern Birds in the Adriatic.*

[Sulla comparsa di specie nordiche nella regione Adriatica settentrionale. Zeitschr. f. d. ges. Orn. 1884, pp. 93–103.]

An important addition to our knowledge of the visits of northern species to that little-known arm of the Mediterranean, the Gulf of Adria. We gather from an announcement in the above-named journal that Dr. Schiavuzzi published in 1883 an account of all the birds of the Trieste district, but we have not yet seen a copy of this memoir.

146. *Stejneger on* Lanius robustus.

[Remarks on *Lanius robustus* (Baird), based upon an examination of the Type Specimen. By Leonhard Stejneger. Pr. Acad. Nat. Sci. Philad. 1885, p. 91.]

Mr. Stejneger has re-examined the Shrike in the Museum of the Philadelphian Academy, which Cassin identified with Swainson's *Lanius elegans*, and Baird subsequently named *Collurio ludovicianus*, var. *robustus*. There is no proof whatever of this specimen having been, as was supposed, obtained in California. As Prof. Baird has already stated, it is "quite different from any recognized American species;" and Mr. Stejneger is of opinion that it agrees most nearly with *Lanius algeriensis*, *L. fallax*, and *L. uncinatus*. *Lanius robustus* may be therefore excluded from the American list.

147. *Stejneger on a new Sparrow.*

[*Passer saturatus*, a new Species of Tree-Sparrow from the Liu-kiu Islands, Japan. By Leonhard Stejneger. Proc. U.S. National Mus. 1885, p. 19.]

Mr. Stejneger describes as *Passer saturatus* an insular form of *P. montanus* from the Liu-kiu (or Loochoo) Islands, North Pacific.

148. *Taczanowski on Abnormal Moults.*

[Notice sur la Mue anormale de certains Oiseaux. Bull. Soc. Zool. France, 1884, p. 303.]

This notice was elicited by a paper by Baron d'Hamonville in a former number of the above journal, respecting the simultaneous shedding of the flight-feathers in the male of *Anas boscas*. M. Taczanowski states that not only was this supposed novelty well known to most sportsmen, but also that it has been observed in many other members of the Anatidæ, and also in the male of *Tetrao tetrix*.

149. *Tait on Portuguese Birds.*

[As Aves en Portugal. By W. Tait. Revista Soc. d. Instrucçao do Porto, vol. iii. pp. 459, 519, vol. iv. p. 80.]

This is the excellent beginning of a work which will probably never be finished in the language of the country in which it was commenced. The Editors of the Review for which the series of articles was undertaken by our correspondent do not seem to have appreciated his work, and have delayed their issue so long as to have exhausted his patience. Mr. Tait has therefore decided to publish his notes on the Birds of Portugal in English, and in the pages of this Journal. Our gain will be the loss of Portugal—a pity, it is true; for there is certainly no list of birds so good, as far as it goes, in the language of her larger neighbour, Spain.

150. *Zeledon on the Birds of Costa Rica.*

[Catalogue of the Birds of Costa Rica, indicating those Species of which the United States National Museum possesses Specimens from that

Country. By José C. Zeledon, of San José, Costa Rica. Proc. U.S. Nat. Mus. 1885, p. 104.]

Mr. Zeledon, the well-known naturalist of San José, Costa Rica, during a short residence at Washington, has revised his former Catalogue of the birds of Costa Rica, published at San José in 1882, and added the new species, the list now containing the names of 692 species, arranged according to the system employed in the United States National Museum.

XLIV.—*Letters, Announcements, &c.*

We have received the following letter addressed to the Editors of 'The Ibis:'—

Topclyffe Grange, Farnborough, Kent,
July 24, 1885.

Dear Sirs,—On the 4th November last the Rev. H. H. Slater exhibited at the Zoological Society's Meeting a specimen of the Barred Warbler (*Sylvia nisoria*), shot by himself on the Yorkshire coast on the 28th August, 1884, and at the same time I exhibited one shot by Mr. Power at Blakeney, in Norfolk, on the 4th September, these being the second and third recorded occurrences of this Warbler in Great Britain. When exhibiting the above bird, I mentioned that Mr. Shaw, of Shrewsbury, had written to me to say that a young Orphean Warbler shot at Broadford, Skye, had been sent to him for preservation, and on my asking him to send it to me for examination, as I thought it might possibly be a Barred Warbler, had replied that he was unable to do so, but that he felt sure it was really an Orphean Warbler. Subsequently I met Mr. Shaw in London, and from his description of the bird I felt more and more convinced that he was wrong in his identification, and he kindly urged the owner of the bird, Mr. George Dunville Lees, of Woodhill, Oswestry, to let me examine it. Mr. Lees brought the bird to me, and I am now able to state positively that it is an immature Barred Warbler, closely resembling the bird exhibited by the Rev. H. H. Slater. Mr. Lees writes to me as follows:—"On the 16th August, 1884, I was out rabbit-shooting near Broadford, in the Isle of Skye, when I saw a bird unknown to me flying up a ravine, and I followed it up and shot it. This is the bird you pronounced to be *Sylvia nisoria*. A friend of mine had previously drawn my attention (close to where I shot the young one) to the note of a bird which I did not know." From this it would appear that there was in all probability an adult Barred Warbler at Broadford, besides the young bird which Mr. Lees obtained. Thus it seems not improbable that this species may have nested in the Isle of Skye in 1884, and that all the above-named three specimens may have belonged to the same brood.

When I was working at the 'Birds of Europe,' Major Feilden wrote to me to say that he had found the Sardinian Warbler (*Sylvia melanocephala*) in Malta in the summer of 1874, and had little doubt that it remained to breed there. This surmise is shown to be correct by the following extract from a letter which I have lately received from Dr. David Bruce, who is now quartered at Malta:—"So far as I am aware, there is no record of the nest of the Sardinian Warbler having been found here [Malta]. This summer these birds are moderately common, and I have found two nests, one empty, the other with three eggs. To make sure of the fact, I shot the female off the nest, and I send you by this post a sketch of the nest and eggs. The nest was placed in the fork of a carob-tree, about four feet from the ground, very loosely constructed of dry grasses, stalks of umbelliferous plants, and lined with yellow fibrous threads, of which I enclose samples, and I also enclose sketch of the male, as I believe there has been some subdivision of the species. The only rare birds I have shot this spring are—one Dartford Warbler (*Melizophilus provincialis*), only once previously recorded by Schembri; one Great White Heron (*Ardea alba*), which was included by Mr. C. A. Wright in his 'List of the Birds of Malta,' also on Schembri's authority; and two Cream-coloured Coursers (*Cursorius gallicus*)." Yours &c.,

H. E. Dresser.

Additions to the Bird-collection of the British Museum in 1884.—We subjoin the portion of the Parliamentary Report on the British Museum for 1884 that relates to the class Aves. Of the 3623 specimens added to the collection during the year, the most important acquisitions were the following:—A series of Cormorants in different plumages from Cornwall, and a similar series of Black Guillemots from Thurso; presented by Dr. A. Günther, F.R.S. A pair of Norfolk Plovers with their eggs, and a pair of White Wagtails with nest and young; presented by Lord Walsingham. A pair of Woodcocks with nest and young; presented by Lord Lovat. Nests of the Song-Thrush, Blackbird, and Kingfisher, with the young and parent birds; presented by T. Harcourt Powell, Esq. Two pairs of Dartford Warblers with nests, eggs, and young; presented by Colonel Irby. Two pairs of Redshanks with nests, eggs, and young; presented by the Rev. H. A. Macpherson. A pair of the Meadow-Pipit and Reed-Warbler, with nests and young; presented by R. Bowdler Sharpe, Esq. The specimens of *Picus villosus* (an American Woodpecker) shot near Whitby in 1848; presented by F. Bond, Esq. Forty-one Wagtails and Pipits from Norway; presented by the Christiania Museum. Sixty-nine specimens (skins and eggs) from Corsica, including the types of *Sitta whiteheadi*; presented by John Whitehead, Esq. Twenty-eight Wagtails and Pipits from Italy; presented by Professor Giglioli. Seven hundred and seventy-five specimens illustrating the plumages of Swallows, Wagtails, and American Warblers; presented by R. Bowdler Sharpe, Esq. One hundred and nineteen American Warblers (*Mniotiltidæ*) and twenty Swallows (*Hirundinidæ*); presented by the United States National Museum. Five birds, among them the type of *Xema sabinii*; presented by the executors of the late Sir Edward Sabine, F.R.S. Twenty-eight specimens from Japan, including the type of *Bubo blakistoni*; presented by Captain Blakiston. Two hundred and fifty-four skins of birds from Nagasaki; presented by F. Ringer, Esq. Three hundred and thirty-two specimens from Central India; presented by Colonel Swinhoe. Ninety specimens from Mysore and the

Nilghiri Hills; presented by W. Ruxton Davison, Esq. Twenty-seven birds from Bourou and Amboyna, including four species new to the collection, as well as the types of *Myzomela wakoloensis*; collected by Mr. H. O. Forbes; purchased. Four hundred and twenty-six specimens presented by the executors of the late W. A. Forbes, Esq., in accordance with his request—this collection consisting of skins obtained by Mr. Forbes on the Niger, and his private collection of Finches and Cuckoos. One hundred and twenty-eight specimens from the Niam-Niam Country, Central Africa, collected by Hr. F. Bohndorff, containing six species new to science and ten new to the collection; purchased. Sixty-four specimens from the Zambesi, including a specimen of *Psalidoprocne antinorii*; presented by Sir John Kirk, K.C.M.G. Nineteen specimens from Ashantee, including the type of *Laniarius lagdeni*; presented by Godfrey Lagden, Esq. The type of *Gecinus weberi*, and examples of two rare Plantain-eaters (*Schizorhis leopoldi* and *Corythaix fischeri*); purchased. Eight specimens from Aden; presented by Major Yerbury, R.A. Three rare Warblers from Jamaica, one (*Helminthotherus swainsoni*) being new to the collection; presented by Edward Newton, Esq., C.M.G. Twelve specimens from the Solomon Islands, of which six belong to species not before represented in the Museum; purchased.

The Hume Collection of Indian Birds.—Mr. R. Bowdler Sharpe, whose departure was announced in our last Number, has returned to London, after having packed and despatched from Simla the whole of the large collections presented to the British nation by Mr. A. O. Hume, C.B. Ornithologists are considerably indebted to Mr. Sharpe for disregarding his personal convenience and undertaking a journey to India in the hot season, for the purpose of packing the collection and shipping it to England before the rains commenced. Mr. Hume's many engagements had prevented him from personally superintending the packing of the cases, and the time which had elapsed (nearly two years) since the collection was offered to the British Museum had naturally exposed it to great risk of destruction from moth and damp. It was, in fact, an intimation from Mr. Hume that several thousands of birds had already been eaten by insects that induced Mr. Sharpe to volunteer to go to India at once and pack the collection before another rainy season commenced and further damage ensued. He reached Simla on the 19th of May, having started on the 24th of April from London, and on his return arrived at Plymouth on the 10th of August, having completed his task in less than four months. Altogether the collection consists of 63,000 birds, 500 nests, 18,500 eggs, besides 400 skins of Mammalia.

Mr. Sharpe wrote to us more than once during the progress of his work, and the following account of Mr. Hume's museum may interest our readers :—"I arrived at Rothney Castle about 10 A.M. on the 19th of May, and was warmly welcomed by Mr. Hume, who lives in a most picturesque situation high up on Jakko, the house being about 7800 feet above the level of the sea. From my bedroom window I had a fine view of the snowy range. Although somewhat tired with my jolt in the tonga from Solun, I gladly accompanied Mr. Hume at once into the museum, for I was only too glad to find some work to do after my month's enforced idleness during the voyage. I had heard so much from my friends, who knew the collection intimately, such as Mr. Davison, Capt. Bingham, and others, that I was not so much surprised when at last I stood in the celebrated museum and gazed at the dozens upon dozens of tin cases which filled the room. Before the landslip occurred, which carried away one end of the museum, it must have been an admirably arranged building, quite three times as large as our meeting-room at the Zoological Society, and, of course, much more lofty. Throughout this large room went three rows of table-cases with glass tops, in which were arranged a series of the birds of India sufficient for the identification of each species, while underneath these table-cases were enormous cabinets made of tin, with trays inside, containing series of the birds represented in the table-cases above. All the specimens were carefully done up in brown-paper cases, each labelled outside with full particulars of the specimen within. Fancy the labour this represents with 60,000 specimens! The tin cabinets were all of materials of the best quality, specially ordered from England, and put together by the best Calcutta workmen. At each end of the room were racks reaching up to the ceiling, and containing immense tin cases full of birds. As one of these racks had to be taken down during the repairs of the north end of the museum, the entire space between the table-cases was taken up by the tin cases formerly housed in it, so that there was literally no space to walk between the rows. On the western side of the museum was the library, reached by a descent of three steps—a cheerful room, furnished with large tables, and containing, besides the egg-cabinets, a well-chosen set of working volumes. One ceases to wonder at the amount of work its owner got through when the excellent plan of his museum is considered. In a few minutes an immense series of specimens could be spread out on the tables, while all the books were at hand for immediate reference. It did not take me many hours to find out that Mr. Hume was a naturalist of no ordinary calibre, and this great collection will remain a monument of the genius and energy of its founder long after he who formed it has passed away. After explaining to me the contents of the museum itself, we went below into the basement, which consisted of eight great rooms, six of them full, from floor to ceiling, of cases of birds, while at the back of the house two large verandahs were piled high with cases full of large birds, such as Pelicans, Cranes, Vultures, &c. An inspection of a great cabinet containing a further series of about 5000 eggs completed our survey: Mr. Hume gave me the keys of the museum, and I was free to commence my task at once. In anticipation of being able to pack the collection himself, Mr. Hume had engaged a staff of carpenters, and had ready twenty-six wooden cases made for as many tin cabinets, which, it was hoped, would convey the collection to England. I thought, for the first few days, that this number would have sufficed; but as the great boxes were brought up from below, and their contents packed in the museum, it became evident that more would be required, and ultimately the birds and mammals occupied forty-seven huge cases, weighing, I suppose, on an average, nearly half a ton apiece. The outside cases were of great strength, all dove-tailed and screwed. Not a nail was used, even the iron bands being screwed on; and to the care with which Mr. Hume designed the construction of the wooden cases, all of the best deodar wood, I attribute the safe carriage of the collection to England. At first it was difficult to find space to pack a single box, but as the room began to be cleared the work proceeded rapidly. Through Mr. Hume's influence, the Public Works Department lent me the services of Babu Kumud Chundra Mukerjee, who turned out a most useful and intelligent help to me (for I was at first somewhat put out by my absolute ignorance of Hindustani), as my foreman (Narain Singh by name) and the thirty Sikh carpenters under him could not understand a word of English. In a very few days, however, I had caught up enough Hindustani to give directions to my staff; and should I ever desire to emulate the immortal author of 'English as she is spoke,' and rush into print with a similar work for the benefit of "studious English youth" in India, I should at least be able to supply a useful chapter "For to pack a box." Of course, after the arrival of the Babu, which was delayed for some days, I had no difficulty.

"The weather was intensely hot for the greater part of my stay in Simla, and I worked mostly in my shirt-sleeves, for I superintended the despatch of every box and packed all the bird-skins and the bulk of the eggs with my own hands. I therefore had no leisure to examine any of the specimens, and I do not suppose that I looked at fifty birds during the whole time I was at Simla. Of course, in cases where moths had commenced an inroad, I had to examine a good many skins to find out the extent of the damage; but in most instances the attacks had only been made on single specimens. Had the collection remained much longer, there can be no doubt that serious damage would have been done; for in some boxes the cocoons were suspended round the interiors in hundreds, and there was a sufficient supply of them to have swept away the whole collection in a few months. Luckily the excellence of Mr. Hume's cabinets had defied so far the ravages of insects on the principal series. By dint of work from six in the morning till sunset, the birds were packed and despatched in about three weeks, and, thanks to the assistance received from Mr. Higgins, the post-master at Simla, and the post-master at Umballa, they were rapidly sent off to Bombay and shipped to England. I have also to acknowledge the help which was rendered to me by the station-masters at Umballa, Delhi, and again at Sabarmati, at all of which stations the cases had to be transferred to fresh lines for conveyance. In fact, every one interested themselves in the work; and Mr. Duxbury, the able traffic-manager of the Bombay, Baroda, and Central India Railway, was particularly obliging in procuring the rapid despatch of the cases, so that all were delivered in good order to the P. & O. Co. at Bombay, and were by them sent to England with great care and rapidity. It so came to pass that, when I reached the Natural History Museum myself, forty of the cases had already been delivered. Thirty-eight I brought on board the 'Ballarat' with me, and the last two cases followed in about ten days. Thus within four months from my leaving the Museum I had the gratification of finding the whole of this most valuable collection safely landed within its walls.

"The packing of the 18,500 eggs proved a long and tedious affair. They were first separately rolled up in wool and arranged in small boxes. These were afterwards carefully packed and padded in large cases. So far as I can see, they have all arrived in good condition. Of course, when once delivered at the railway, the risk of damage to the cases was greatly diminished; but before reaching the train at Umballa there was the task of getting them down the mountains, and the Bullock-train office at Simla was at a distance of a mile from Mr. Hume's house. My staff of coolies proved insufficient for the task of lowering the heavy weights down the trap-door of Mr. Hume's museum, and I engaged some more of these worthies; but as they only managed to carry two cases down the mountain in a day, and further distinguished themselves by dropping a case some eight or ten feet, I applied to Mr. Higgins at the Simla post-office, who despatched some of the men employed by him to my assistance. These were sturdy fellows from Nahun, who come to Simla during the season and earn a living as carriers. I was assured by the Babu, and can quite believe it, that they often carry on their backs three maunds (=240 lbs.), and this on a hill-road. Anyhow, they soon managed the portage of the cases, sixteen of them working in a gang (eight for carrying and eight for a relay), and they would sometimes convey as many as six in a morning down the steep descent from Mr. Hume's house to the Bullock-train office. Thence the boxes were despatched along the narrow road on the side of the mountains which connect Simla with Kalka, and so on to Umballa along a flatter and more level road, this portion of the journey occupying about two and a half days.

"These details may seem trivial, but I think that some interest attaches to the despatch of the collection and its departure from the home which it adorned so long; and I trust that my few notes will have given some idea of the energy and prowess which Mr. Hume displayed in the formation and management of such a museum. Before my arrival he had been obliged to destroy a number of specimens which had been eaten by *Dermestes,* and he believes that at least 20,000 skins were lost in this way. As I said before, however, the principal series, amongst which are the types, appears to be nearly intact, and the losses are nearly confined to the Ceylonese birds and to Mr. Chill's Oude collection; but a large number of skins of Turdidæ and Sylviidæ also perished.

"Besides the collections made by Mr. Hume himself in the North-west Provinces, Scinde, and other parts of India, there are the immense series procured by Mr. Davison in Tenasserim and the Malay Peninsula, as well as in Southern India, the Andamans, and the Nicobars; a splendid series of skins collected in Munipur by Mr. Hume himself; and large selections from the collections of Mr. Brooks, Major Butler, Mr. Oates, Capt. Bingham, and others of the band of workers who contributed by their labours to the publication of the eleven volumes of 'Stray Feathers.' Then there is the fine collection of Darjeeling birds made by the late Mr. Mandelli, besides hundreds of other interesting specimens from all parts of the British Asian Empire. The richness of the egg-collection is well known from Mr. Hume's notes on the 'Nests and Eggs of Indian Birds,' while the number of specimens speaks volumes for its extent and value.

"It is not too much to affirm that such a private collection as Mr. Hume's is not likely to be formed again; for it is doubtful if such a combination of genius for organization with energy for the completion of so great a scheme, and the scientific knowledge requisite for its proper development, will again be combined in a single individual.

"I have now explained how the Hume collection was packed with all speed to get it out of India into England, where moth and rust *do* corrupt, it is true, but not with such rapidity as in the moist climate of Simla during the rains. Time did not allow of sorting specimens, or of packing them in any order of classification, and therefore the whole work of rearranging the collection will have to be done in England. I shall do my best to get through this as speedily as possible, in order that Mr. Hume's princely donation may be rendered available for the purposes of science. The arrangement will doubtless be facilitated by the care with which the specimens are labelled; but still it is best to recognize the fact that its incorporation in the general collection of birds at the Natural History Museum must be a work of some years.

The Development of the Avian Sternum.—A remarkable memoir on the development of the sternum in Birds, prepared by Miss Beatrice Lindsay, of Girton College, and communicated to the Zoological Society of London by Dr. H. Gadow at their meeting on June 16th last, will appear in the forthcoming number of the Society's 'Proceedings.' Miss Lindsay, after close investigation of the embryonic condition of different stages in five types of bird-structure (the Ostrich, Guillemot, Gull, Domestic Fowl, and Gannet), has come to the conclusion that the keel of Carinate Birds is a special outgrowth of the true sternum peculiar to Birds, and not homologous with the episternum or interclavicle of Reptiles, as has been held by Götte and others. According to Miss Lindsay's observations, there are no traces whatever in the embryonic stages of the Ostrich of the existence of any rudiments of the clavicles or keel. If this be the case, it follows that the view held by some Morphologists that the Ostrich may be a degraded descendant of some Carinate form can no longer be supported. It is to be hoped that Miss Lindsay may be induced to continue her investigations on the other existing forms of Ratite Birds, so as to settle, if possible, the vexed question as to the unity of this group.

More News of Dr. O. Finsch.—In April last Dr. Finsch was at Mioko, Duke of York Islands, whence he sends us descriptions of two new birds from New Ireland, which will appear in our next Number. Dr. Finsch speaks of the extraordinary form of the trachea in *Manucodia comrii*, which he had met with in the D'Entrecastaux group of islands. Nothing, he says, can exceed the beauty of this bird when fresh. Unfortunately Dr. Finsch had no collector with him, and having much work in other ways, he has been unable to make a large collection; but, as we all know, he is well acquainted with the Papuan avifauna, and he never fails to record his ornithological observations in his diary.

Habits of Raggi's Paradise-bird.—So little is known of the habits of the Paradiseidæ that the following account of *Paradisea raggiana*, extracted from 'Work and Adventure in New Guinea,' by Messrs. Chalmers and Wyatt, will be of interest:—"One morning we had camped on a spur of the Owen Stanley Range, and being up early, to enjoy the cool atmosphere, I saw on one of the clumps of trees close by six Birds of Paradise, four cocks and two hens. The hens were sitting quietly on a branch, and the four cocks, dressed in their very best, their ruffs of green and yellow standing out, giving them a large handsome appearance about the head and neck, their long flowing plumes so arranged that every feather seemed carefully combed out, and the long wires stretched well out behind, were dancing in a circle round them. It was an interesting sight; first one, then another would advance a little nearer to a hen, and she, coquette-like, would retire a little, pretending not to care for any advances. A shot was fired, contrary to my expressed wish; there was a strange commotion, and two of the cocks flew away, the others and the hens remained. Soon the two returned, and again the dance began and continued long. As I had strictly forbidden any more shooting, all fear was gone; and so, after a rest, the males came a little nearer to the dark brown and certainly not pretty hens. Quarrelling ensued, and in the end all six birds flew away.

"Passing through a forest at the back of the Astrolabe, I saw several more engaged as above; our approach startled them, and away they flew.

"Anxious to taste the flesh, I had one cooked after being skinned; but, although boiled for several hours, it was as tough as leather, and the soup not much to our taste. Fortunately we had other things for dinner, so put the paradise-dish aside."

Recent Appointments in the United States.—We have much pleasure in announcing that Mr. William Brewster, of Cambridge, Mass., has been appointed to succeed Mr. J. A. Allen in the care of the ornithological collections of the Museum of Comparative Zoology at Cambridge; also that, a branch of "Economic Ornithology" having been established under the Division of Entomology of the Department of Agriculture in the U.S. Government, Dr. C. Hart Merriam has been selected as Ornithological Agent to take charge of this work. Dr. Merriam's headquarters will be the "U.S. Department of Agriculture, Washington, D.C."

INDEX.

Acanthylis collaris, 437.
Accentor atrogularis, 356.
—— erythropygius, 107.
—— fulvescens, 356.
—— modularis, 35.
—— ocularis, 112.
Accipiter nisus, 25, 56, 248, 359.
—— variegatus, 56.
Acredula caudata, 326.
—— irbii, 35.
—— rosea, 326.
—— tephronota, 111.
—— ——, var. major, 111.
Acridotheres ginginianus, 128.
—— tristis, 128.
Acrocephalus bæticatus, 344.
—— bistrigiceps, 388.
—— dybowskii, 112.
—— stentoreus, 125.
—— turdoides, 35.
Acryllium vulturinum, 414.
Aedon leucoptera, 406.
Ægialitis bicincta, 270.
—— cantiana, 41, 132.
—— curonica, 42.
—— dubia, 132.
—— hiaticula, 178.
—— minuta, 132.
—— tricollaris, 417.
Ægithalus calotropiphilus, 322.
Ægithina tiphia, 68.
—— zeylonica, 68.
Æx galericulata, 326.
—— sponsa, 326.
Agelæus imthurni, 218.
Aglaia nigrocincta, 210.
Agrodroma campestris, 127.
Agrodroma jerdoni, 127.
Agyrtria bartletti, 317.
—— brevirostris, 436.
—— fluviatilis, 317.
—— leucogaster, 435.
—— taczanowskii, 317.
—— tobaci, 435.
Alauda arborea, 40.
—— arvensis, 40, 83, 246.
—— cristata, 246.
—— dulcivox, 389.
—— gulgula, 130, 389.
—— guttata, 389.
—— raytal, 130.
—— rufa, 202.
Alaudula leucophæa, 354.
Alca impennis, 90, 223, 225, 318.
—— torda, 90, 255.
—— troile arra, 364.
Alcedo bengalensis, 61.
—— ispida, 27, 247.
—— semicærulea, 395.
Alectorurus guiru-yetapa, 279.
Alseonax latirostris, 67.
Aluco flammeus, 80.
Amadina malabarica, 129.
Amazilia cupreicauda, 435.
Amblyornis subalaris, 115.
Amblystoma tigrinum, 316.
Ammomanes phœnicura, 129.
Ampelis cærulea, 304.
—— carnifex, 304.
—— cayana, 305.
—— cinerea, 302.
—— cotinga, 304.
—— fusca, 305.
—— hypopyrrha, 303.
Ampelis nivea, 306.
—— pampadora, 305.
—— tersa, 207.
—— variegatus, 306.
Anabates cristatus, 283.
—— erythrocercus, 420.
—— lophotes, 283.
—— ochrolæmus, 420.
—— pyrrhodes, 420.
—— sclateri, 420.
—— turdinus, 420.
—— unirufus, 283.
Anabazenops ruficollis, 234.
Anæretes nigricristatus, 234.
Anas boscas, 45, 137, 250, 452.
—— caryophyllacea, 137.
—— erythrorhyncha, 415.
—— penelope, 358.
—— pœcilorhyncha, 137.
—— sponsa, 326.
—— strepera, 357.
—— viduata, 414.
Anastomus oscitans, 136.
Anorthura pallescens, 112.
Anous cinereus, 265.
—— melanogenys, 264, 265, 266.
—— stolidus, 264.
Anser, sp. inc., 45.
—— cinereus, 136.
—— ferus, 88.
—— hutchinsi, 449.
—— indicus, 111.
—— leucopareius, 448, 449.
Anthochæra carunculata, 99.
Anthus antarcticus, 320.

Anthus arboreus, 167.
—— campestris, 36, 244.
—— cervinus, 165, 182.
—— correndera, 277.
—— japonicus, 112.
—— nattereri, 324.
—— obscurus, 36, 83.
—— pratensis, 36, 83, 244.
—— rufus, 202.
—— spinoletta, 354.
—— stejnegeri, 112.
—— trivialis, 36, 127.
Antrostomus nigrescens, 438, 439.
—— whitelyi, 438.
Anumbius acuticaudatus, 281.
Aplonus fuscus, 270.
Aptenodytes pennanti, 105.
Aquila chrysaetus, 24.
—— clanga, 56, 382.
—— fulvescens, 382, 386.
—— rapax, 386.
—— vindhiana, 57, 386.
Arbelorhina cærulea, 207.
—— cyanea, 207.
Ardea alba, 454.
—— bubulcus, 250.
—— cinerea, 43, 84, 135, 250, 361.
—— egretta, 282.
—— garzetta, 44, 250.
—— purpurea, 44, 135.
—— ralloides, 44.
Ardeola grayii, 136.
Argya aylmeri, 390, 404.
—— malcolmi, 67.
Arremon personatus, 212.
—— silens, 212.
Arundinicola leucocephala, 291.
Asio accipitrinus, 258.
—— brachyotus, 26.
—— capensis, 247.
—— otus, 26, 194, 241, 247, 258.
Astur badius, 56.
Asturina ruficauda, 193.
Atelornis crossleyi, 101.
—— pittoides, 101.
Athene glaux, 392.
—— meridionalis, 260.
—— noctua, 247, 259, 260.
—— orientalis, 260.
Atraphornis aralensis, 354.
Atticora cyanoleuca, 206.
Atticora fasciata, 205, 206.
—— fucata, 206.
—— melanoleuca, 206.
Attila, sp., 191.
—— brasiliensis, 303.
—— cinereus, 290.
—— citreopygius 191.
—— cozumelæ, 321.
—— griseigularis, 290.
—— spadaceus, 304.
—— spodiostethus, 304.
—— thamnophiloides, 304.
—— uropygialis, 304.
Aulia hypopyrrha, 303.
—— sibilatrix, 303.
Automolus sclateri, 420.
Avocettula recurvirostris, 433.

Basileuterus auricapillus, 203.
—— auricularis, 324.
—— bolivianus, 324.
—— meridanus, 324.
—— mesoleucus, 203.
—— roraimæ, 203, 324.
—— veraguensis, 324.
—— vermivorus, 203.
Bathmidurus niger, 302.
Baza ceylonensis, 362.
Bernicla canadensis leucopareia, 449.
—— poliocephala, 229.
Bethylus media, 213.
Bolborhynchus monachus, 282.
Bonasa bonasia, 50.
Botaurus stellaris, 44, 250.
Brachypternus aurantius, 62.
—— badius, 12, 14.
—— fokiensis, 12, 14.
Brachypteryx salacensis, 327.
Buarremon albiceps, 234, 275.
—— capitalis, 227.
—— flavo-virens, 274.
—— nationi, 275.
—— pallidinuchus, 275.
—— personatus, 212.
—— sordidus, 275.
—— tibialis, 227.
Bubo ascalaphus, 262.
—— bengalensis, 58.
—— blakistoni, 455.
—— coromandus, 58.
—— lacteus, 392.
—— maculosus, 22.
Bubo maximus, 262.
—— ——, var. sibirica, 262.
—— turcomanus, 262, 263.
Bubulcus coromandus, 136.
Bucanetes mongolicus, 353.
Buceros galeatus, 444.
—— leucopygius, 315.
—— nasutus, 315.
—— ——, var. dubia, 315.
—— subcylindricus, 315.
—— subquadratus, 315.
Buchanga assimilis, 401.
—— atra, 66.
—— cærulescens, 66.
—— longicaudata, 66.
Bucorax abyssinicus, 116.
—— pyrrhops, 116.
Budytes melanocephalus, 112.
Buphaga erythrorhyncha, 410.
—— habessinica, 410.
Burnesia socialis stewarti, 126.
Butastur teesa, 57.
Buteo augur, 391.
—— brachyurus, 450.
—— desertorum, 248.
—— ferox, 57.
—— fuliginosus, 450.
—— hydrophilus, 391.
—— lagopus, 162.
—— lineatus, 448.
—— —— alleni, 448.
—— oxypterus, 448, 450.
—— solitarius, 450.
—— swainsoni, 450.
—— ——, var. oxypterus, 450.
—— tachardus, 111.
—— ——, var. fusco-ater, 111.
—— ——, var. rufus, 111.
—— vulgaris, 25.
Butorides javanica, 136.
—— schrencki, 224.

Cacatua ducorpsi, 316.
—— gymnopis, 316.
Caccabis petrosa, 251.
—— rufa, 41.
Cactornis inornata, 324.
Calandrella brachydactyla, 40, 130, 246.
Calliphlox amethystina, 434.

Calliste cayana, 209.
—— flaviventris, 210.
—— guttata, 209.
—— gyrola, 209.
—— nigricincta, 210.
—— punctata, 209.
—— tatao, 209.
—— whitelyi, 210.
—— xanthogaster, 209.
Callospiza cayana, 209.
—— gyrola, 209.
—— mexicana, 210.
—— punctata, 209.
—— tatao, 209.
Calyptophilus frugivorus, 99.
Calyptrophorus gularis, 216.
Campephaga cana, 101.
Campethera crawfurdi, 149.
—— hodgei, 142.
—— hodgsonii, 151.
—— javensis, 146.
Campothera nubica, 393, 394.
Campylopterus hyperythrus, 432.
—— largipennis, 432.
—— phainopeplus, 316.
Campylorhynchus bicolor, 199.
—— griseus, 199.
Cancroma cochlearia, 186, 450.
—— zeledoni, 450.
Caprimulgus albicollis, 439.
—— asiaticus, 60.
—— cayennensis, 439.
—— decussatus, 439.
—— europæus, 27.
—— frænatus, 232.
—— grandis, 437.
—— jamaicensis, 438.
—— jotaka, 194.
—— longicaudatus, 437.
—— nacunda, 438.
—— nigrescens, 438.
—— semitorquatus, 438.
Carbo capillatus, 270.
—— cormoranus, 270.
—— bicristatus, 270.
—— filamentosus, 270.
Cardinalis saturatus, 321.
Carduelis elegans, 38, 245.
Carine brama, 59.
—— glaux, 392.
Carpodacus erythrinus, 129.
Carpodacus rhodochlamys, 353.
—— rubicilla, 353.
—— rubicillus, 111.
Carpophaga finschi, 227.
—— rubicera, 316.
Casarca cana, 350.
Cassicus affinis, 218.
—— albirostris, 218.
—— cristatus, 217.
—— hæmorrhous, 218.
—— persicus, 217.
Cassidix oryzivora, 219.
Catamenia, sp., 216.
—— homochroa, 216.
Cathartes burrovianus, 448, 450.
—— urubitinga, 450.
Cecropis japonica, 194.
Centrococcyx rufipennis, 64.
Centropus superciliosus, 400.
—— tolou, 101.
Centurus aurifrons dubius, 192.
—— dubius, 186, 192, 322.
—— leei, 321, 322.
—— rubriventris, 186, 192.
—— santacruzi, 192.
Cephalopterus ornatus, 306.
Cepphus carbo, 117.
—— grylle, 117.
—— mandti, 117.
—— motzfeldi, 117.
Cerchneis tinnunculus, 56, 392.
Cercomacra atrothorax, 428.
—— cinerascens, 426.
—— tyrannina, 427.
Cercomela fusca, 125.
Certhia cærulea, 207.
—— cinnamomea, 419.
—— cyanea, 207.
—— familiaris, 31.
—— spiza, 206.
Certhiola bahamensis, 189.
—— caboti, 185, 189.
—— chloropyga, 207.
—— dominicana, 449.
—— finschi, 449.
—— flaveola, 207.
—— martinicana, 449.
—— sancti-thomæ, 449.
—— sundevalli, 449.
Certhiola tricolor, 114.
Ceryle alcyon, 325.
—— maxima, 343.
—— rudis, 61.
Cettia pallidipes, 389.
—— fortipes, 388
—— sericea, 35, 243.
—— squamiceps, 389.
Ceuthmochares intermedius, 116.
Chætura brunneitorques, 437.
—— cinereiventris, 437.
—— rutila, 437.
—— spinicauda, 437.
—— yucatanica 317.
—— zonaris, 20, 436, 437.
Chalcophanes jamaicensis, 219.
—— minor, 219.
Chalcopsittacus duivenbodei, 104.
Chamæza fulvescens, 429.
Charadrius apricarius, 97.
—— coronatus, 417.
—— fulvus, 114, 132.
—— gallicus, 415.
—— pluvialis, 41, 85, 252.
—— tricollaris, 417.
Charmosyna margaritæ, 228.
Chasiempis dimidiata, 19.
—— sandwichensis, 18, 19.
—— sclateri, 17, 18, 19.
Chasmorhynchus carunculatus, 306.
—— niveus, 306.
—— variegatus, 306.
Chatarrhœa caudata, 63, 68.
Chaulelasmus streperus, 45, 137.
Chelidon urbica, 27, 175.
Chera progne, 345.
Chettusia cinerea, 132.
—— coronata, 417.
—— villotæi, 132.
Chionis alba, 320.
—— minor, 320.
Chiromachæris manacus, 301.
Chiroxiphia caudata, 300.
—— linearis, 110.
—— longicauda. 301.
—— pareola, 300.
Chlorophanes spiza, 206, 207.

Chlorophonia roraimæ, 208.
Chloropipo unicolor, 234.
—— uniformis, 299.
Chlorospingus flavovirens, 274, 275.
—— hypophæus, 227.
—— phæocephalus, 275.
—— pileatus, 227.
—— punctulatus, 227.
—— reyi, 288.
—— speculiferus, 273.
—— superciliaris, 288, 289.
Chlorostilbon aureiventris, 281.
—— caniveti, 191, 322.
—— forficatus, 321, 322.
—— prasinus, 436.
—— stuebelii, 446.
Chrysobronchus virescens, 435.
—— viridicaudus, 435.
—— viridissimus, 435.
Chrysococcyx cupreus, 343.
Chrysocolaptes festivus, 62.
Chrysolampis moschitus, 434.
Chrysomitris barbata, 217.
—— citrinella, 39.
—— icterica, 217.
—— spinus, 39.
Chrysomus icterocephalus, 218.
Chrysoptilus cristatus, 282.
Chrysotis albifrons, 192.
—— xantholora, 186, 192.
Cichlopsis gularis, 199.
Ciconia alba, 44, 250.
—— maguari, 282.
—— nigra, 135.
Cinclus albicollis, 37.
—— aquaticus, 173.
—— cashmiriensis, 37.
—— melanogaster, 173.
Cinnyris asiatica, 64.
—— erikssoni, 98.
—— habessinicus, 406.
—— henkei, 446.
Circaetus gallicus, 57.
—— pectoralis, 342.
Circus æruginosus, 26, 58, 248.
—— ——, var. unicolor, 111.
—— cineraceus, 26, 248.
—— cyaneus, 26.
Circus macrurus, 57.
—— pygargus, 57.
Cissa hypoleuca, 450.
Cissopis media, 213.
—— minor, 213.
Cisticola buchanani, 126.
—— cursitans, 35, 243.
—— madagascariensis, 102.
Cistothorus alticola, 202.
Clangula glaucion, 46, 171, 358.
Clytolæma rubinea, 436.
Cnipolegus, sp. inc., 18.
Coccoborus ater, 214.
Coccothraustes vulgaris, 39, 241, 245.
Coccystes glandarius, 247.
—— jacobinus, 63.
—— serratus, 344.
Cœligena hemileuca, 317.
Cœreba cærulea, 207.
—— cyanea, 207.
Colius capensis, 307, 308, 309, 310, 311, 313.
—— castanonotus, 308, 310, 313.
—— coromandelicus, 309.
—— erythromelas, 309.
—— erythromelon, 307, 308, 309, 313.
—— erythropus, 310.
—— erythropygius, 310.
—— indicus, 309.
—— leucocephalus, 308, 312, 313, 314.
—— leuconotus, 310.
—— leucotis, 232, 308, 311, 312, 314.
—— —— affinis, 312, 313, 314.
—— —— typicus, 312, 313.
—— macrourus, 307, 308, 313.
—— macrurus, 309.
—— minor, 311.
—— nigricollis, 308, 310, 313.
—— panayensis, 311.
—— quiriva, 309.
—— senegalensis, 308, 309.
—— striatus, 307, 308, 311, 312.
—— ——, intermedius, 311, 313.
—— —— minor, 311, 313.
Colius striatus typicus, 311, 313.
Collurio ludovicianus, var. robustus, 451.
Colobathris macularia, 430.
—— tinniens, 430.
Colopterus cristatus, 293.
—— galeatus, 293.
Columba abyssinica, 414.
—— arquatrix, 345.
—— intermedia, 130.
—— jamaicensis, 193.
—— leucocephala, 186, 193.
—— livia, 41, 84, 224, 251.
—— maculosa, 282.
—— œnas, 251.
—— palumbus, 41, 84, 251.
—— waalia, 414.
Columbula picui, 282.
Colymbus fluviatilis, 418.
—— glacialis, 89, 90, 361.
Contopus albicollis, 317.
—— ardesiacus, 298.
—— depressirostris, 110.
—— pileatus, 449.
Conurus chloropterus, 225.
Copsychus pica, 102.
—— saularis, 124.
Copurus leuconotus, 291.
—— pœcilonotus, 291.
Coracias caudata, 399.
—— garrula, 84.
—— indica, 61.
—— levaillanti, 399.
—— lorti, 390, 399.
—— militaris, 305.
—— nævia, 399.
—— pilosa, 399.
—— scutatus, 306.
Corone macrorhyncha, 128.
—— splendens, 128.
Corvus affinis, 389.
—— assimilis, 401.
—— calvus, 306.
—— cayanus, 219.
—— corax, 38, 82, 160, 360.
—— cornix, 38, 82, 160.
—— corone, 38, 236.
—— frugilegus, 38, 82.
—— latirostris, 446.

Corvus monedula, 38, 246.
—— splendens, 64.
—— tingitanus, 246.
Corydalla rufula, 127.
Coryphospingus cristatus, 216.
Corythaix fischeri, 456.
Corythopis anthoides, 430.
Cosmopsarus regius, 411.
Cossypha sharpei, 102.
Cotile fucata, 206.
—— riparia, 27, 206.
—— rupestris, 27, 244.
—— shelleyi, 324.
—— sinensis, 60.
Cotinga cærulea, 304.
—— cayana, 305.
Coturniculus manimbe, 216.
—— mexicanus, 450.
—— passerinus, 190.
Coturnix communis, 41, 131, 251.
—— coromandelica, 132.
—— coturnix, 51.
—— ussuriensis, 224.
Crateropus bohndorffi, 116.
Creadion carunculatus, 99.
—— cinereus, 99.
Crex egregia, 346.
—— pratensis, 84, 361.
Crithophaga miliaria, 112.
—— ——, var. minor, 112.
Crocopus chlorogaster, 130.
Cuculus canorus, 41, 63, 84, 226, 357.
—— heuglini, 226.
—— rochii, 102.
—— solitarius, 323.
Culicicapa ceylonensis, 66.
Cursorius burchelli, 416.
—— cinctus, 416.
—— coromandelicus, 132.
—— gallicus, 415, 454.
—— —— somalensis, 390, 415.
—— gracilis, 416.
—— rufus, 347.
—— senegalensis, 416.
Cyanecula suecica, 125, 163, 174.
Cyanecula wolfi, 32, 241, 242.
Cyanicterus venustus, 211.
Cyanistes cyanus tianschanicus, 353.
Cyanocorax cayanus, 219.
—— cucullatus, 449.
—— hyacinthinus, 219.
—— ornatus, 449.
—— violaceus, 219.
Cyanospiza ciris, 190.
—— cyanea, 190.
Cyanus, sp. ?, 361.
Cyclopsitta occidentalis, 316.
Cyclorhis guianensis, 205.
—— insularis, 321.
Cyclorhynchus flaviventris, 296.
Cygnus, sp. inc., 89.
—— bewicki, 443.
—— musicus, 371, 443.
—— olor, 443.
Cymbilanius lineatus, 423.
—— —— fasciatus, 110.
Cyphorhinus cantans, 200.
—— leucostictus, 200.
—— musicus, 200.
Cypselus affinis, 60.
—— apus, 20, 27.
—— melba, 27.
—— spinicaudus, 437.

Dacelo semicærulea, 395.
Dacnis angelica, 207.
—— cayana, 207.
—— cyanocephala, 207.
—— spiza, 206.
Dafila acuta, 45, 137, 250.
Dasycephala thamnophiloides, 304.
—— uropygialis, 304.
Daulias hafizi, 112.
—— luscinia, 32.
Dendrobates æthiopicus, 393.
—— hemprichii, 393.
Dendrochelidon coronata, 60.
Dendrocincla fumigata, 421.
—— longicauda, 421.
—— merula, 421.
—— turdina, 290.
Dendrocitta rufa, 128.
Dendrocolaptes albolineatus, 422.
Dendrocolaptes certhia, 421.
—— cuneatus, 421.
—— fumigatus, 421.
—— guttatus, 422.
—— merula, 421.
—— plagosus, 421.
—— trochilirostris, 422.
Dendrocopus major, 28.
—— pardalotus, 422.
Dendrocygna javanica, 137.
—— viduata, 414, 415.
Dendrœca æstiva, 202.
—— granadensis, 324.
—— maculosa, 448.
—— petechia rufivertex, 321.
—— rufo-pileata, 113.
—— striata, 202.
Dendromus æthiopicus, 393.
—— hemprichii, 393.
Dendropicus hemprichi, 393.
Dendroplex picus, 422.
Dendrornis guttatoides, 422.
—— pardalotus, 422.
—— polysticta, 422.
Dicæum æneum, 227.
—— sulaense, 324.
—— tristrami, 228.
Dicrocercus hirundineus, 226.
Dicrurus divaricatus, 401.
—— forficatus, 101.
—— lugubris, 401.
Diglossa major, 206.
Dinornis queenslandiæ, 103.
Diomedea brachyura, 440.
—— nigripes, 363.
Diphlogæna aurora, 316.
—— hesperus, 316.
Diphyllodes wilsoni, 447.
Dissura episcopus, 135.
—— longicauda, 434.
Diuca minor, 277.
Dolichonyx oryzivorus, 191, 218.
Donacobius atricapillus, 199.
Donacospiza albifrons, 277.
Doryphera johannæ, 433.
Drepanorhynchus reichenowi, 226.
Drepanornis cervinicauda, 228.

Dromæus sivalensis, 107.
Dryocopus javensis, 145.
—— leucogaster, 145.
—— martius, 140, 157.
—— richardsi, 140, 156.
Dryopicus hodgsoni, 150.
—— leucogaster, 146, 149.
Dryoscopus cruentus, 402.
—— ruficeps, 390, 402.
Dulus nuchalis, 314.
Dumetia hyperythra, 67.
Dysithamnus ardesiacus, 424.
—— spodionotus, 424.
—— tambillanus, 234.

Eclectus roratus, 230.
Edolius lugubris, 401.
Elainea albiceps, 294.
—— albicollis, 295.
—— aurifrons, 301.
—— brevirostris, 295.
—— cayanensis, 295.
—— cinerascens, 114.
—— elegans, 295.
—— gracilis, 234.
—— olivina, 294.
—— pagana, 294.
—— ruficeps, 294.
—— spadicea, 296.
Elanus cæruleus, 58, 249.
Emberiza cioides, 354.
—— ciris, 190.
—— cirlus, 40.
—— citrinella, 83.
—— miliaria, 40, 83, 245.
—— orizivora, 191, 218.
—— pileata, 216.
—— schœniclus, 40, 245.
Emberizoides macrurus, 216.
Embernagra platensis, 278.
Empidochanes olivus, 297.
—— pœcilurus, 298.
Empidonax atriceps, 113.
—— gracilis, 321.
—— viridescens, 113.
Empidonomus varius, 298.
Engyptila albifrons, 193.
—— gaumeri, 193, 317.
—— jamaicensis, 186, 193, 317.
Epimachus minor, 397.
Erismatura leucocephala, 46.
Erithacus rubecula, 32, 243.
—— suecica, 105.
Erythropygia leucoptera, 226, 406.
Erythrospiza obsoleta, 353.
Erythrosterna parva, 67.
Esacus recurvirostris, 133.
Estrelda amandava, 129.
—— formosa, 129.
—— savatieri, 322.
Eucephala cærulea, 435.
Eudocimus albus, 186.
Eudromias morinellus, 175.
Eudynamis honorata, 63.
—— taitensis, 270.
Eudyptes antipodum, 104, 105.
—— chrysocome, 104, 105.
Eudyptula albigularis, 108.
—— serresiana, 108.
Euetheia olivacea intermedia, 321.
Eugenes spectabilis, 317.
Euphonia cayana, 208.
—— cayennensis, 208.
—— minuta, 208.
—— musica, 99.
—— nigricollis, 208.
—— plumbea, 208.
—— purpurea, 272.
—— violacea, 208, 272.
—— —— lichtensteini, 272.
—— xanthogastra, 208.
Euplectes franciscanus, 409.
—— frederichseni, 226.
—— ignicolor, 409.
—— petiti, 409.
—— scioanus, 232.
Eurocephalus anguitimens, 403.
—— rueppelli, 403.
Euryceros prevosti, 101.
Eurystomus madagascariensis, 102.
Euscarthmus russatus, 292.
Euspiza luteola, 129.
—— melanocephala, 129.

Falcinellus igneus, 136.
—— senegallensis, 395.
Falco æsalon, 159, 249.
Falco anthracinus, 193.
—— chicquera, 55.
—— eleonoræ, 25.
—— feldeggi, 249.
—— gabar, 391.
—— gyrfalco, 79.
—— juggur, 55.
—— peregrinator, 55.
—— peregrinus, 80, 164.
—— punicus, 25.
—— semitorquatus, 391.
—— tinnunculus, 80, 160. 392.
Florisuga mellivora, 433.
Fluvicola bicolor, 291.
—— pica, 291.
Formicarius bambla, 200.
—— brevicauda, 430.
—— cayennensis, 429.
—— hoffmanni, 429.
—— musicus, 200.
—— nigrifrons, 429.
—— torquatus, 429.
—— varius, 430.
Formicivora axillaris, 425.
—— cinerascens, 426.
—— grisea, 426.
—— pygmæa, 425.
—— quadrivittata, 425.
Francolinus bicalcaratus, 241, 251.
—— granti, 414.
—— ochrogaster, 414.
—— pictus, 131.
—— rovuma, 414.
—— shoanus, 414.
Fratercula arctica, 91, 361.
Fringilla cælebs, 40, 165, 241, 245.
—— cristatus, 216.
—— flavirostris, 83.
—— gutturalis, 215.
—— icterica, 217.
—— ignicolor, 409.
—— macroura, 216.
—— manimbe, 216.
—— passerina, 190.
—— plumbea, 215.
—— splendens, 215.
—— spodiogena, 245.
Fulica americana, 231.
—— atra, 44, 135.
—— caribbæa, 231.
—— cristata, 347.
Fuligula cristata, 46, 138.
—— ferina, 45, 138.
—— marila, 46.
—— nyroca, 358.

Furnarius leucopus, 418.
—— rufus, 280.

Galeoscoptes carolinensis, 186.
Galerita magna, 354.
Gallinago cælestis, 42, 176, 253.
—— gallinaria, 133.
—— gallinula, 133.
—— major, 42, 348.
—— nigripennis, 347.
—— paraguaiæ, 282.
—— stenura, 133.
Gallinula chloropus, 44, 105, 135, 252.
Galloperdix spadiceus, 131.
Gallus sonnerati, 131.
Garrulus glandarius, 38, 111.
—— —— cervicalis, 241, 246.
—— ——, var. hyrcanus, 111.
—— hyrcanus, 111.
—— krynickii, 111.
—— melanocephalus, 111.
—— minor, 246.
Gecinus weberi, 456.
Geocichla machiki, 445.
—— schistacea, 446.
Geococcyx californicus, 286.
Geocoraphus cordofanicus, 407.
Geositta cunicularia, 280.
Geothlypis æquinoctialis, 203.
—— bairdi, 110.
—— velata, 203.
Gerygone bimaculata, 446.
—— modesta, 270.
Glaucidium passerinum, 260.
Glaucis hirsuta, 431.
Glycychæra fallax, 316.
Glyphorhamphus cuneatus, 421.
Gracula fœtida, 306.
Graculus bicristatus, 270.
Grallaria brevicauda, 430.
—— intermedia, 110.
—— macularia, 430.
—— nana, 430.
Grallaria regulus, 430.
—— simplex, 430.
—— varia, 430.
Grallaricula nana, 430.
Granatellus sallæi, 449.
—— —— boucardi, 449.
—— pelzelni, 204.
Graucalus macei, 65.
—— pusillus, 227.
—— timorlaoënsis, 446.
Grus antigone, 133.
—— communis, 252.
—— virgo, 252.
Guira piririgua, 282.
Guiraca cyanea, 213, 214.
Gygis candida, 266.
Gymnocephalus calvus, 306.
Gymnoderus fœtidus, 306.
Gymnorhis pyrgita, 408.
Gymnornis flavicollis, 129.
Gypaëtus barbatus, 24.
Gyps fulvescens, 53.
—— pallescens, 54.
—— rueppelli, 322, 341.

Habrura pectoralis, 279.
Hadrostomus, sp., 191.
—— aglaiæ, 191.
—— minor, 302.
—— niger, 191.
Hæmatoderus militaris, 305.
Hæmatopus osculans, 195.
—— ostralegus, 42.
Halcyon chloris, 49, 332.
—— juliæ, 49.
—— leucopygia, 228.
—— norfolkiensis, 49.
—— occipitalis, 49, 332.
—— sacra, 49.
—— sancta, 48.
—— semicærulea, 343, 395.
—— smyrnensis, 61, 237.
—— solomonis, 48, 49.
—— tristrami, 49, 316.
—— vagans, 49.
Haliaëtus albicilla, 25, 79.
—— hypoleucos, 112.
—— leucocephalus, 116.
—— pelagicus, 117.
Haliastur indus, 58.
Hapalocercus pectoralis, 293.
Harelda glacialis, 162, 174, 371.
Harporhynchus guttatus, 321.
—— longirostris, 187.
—— melanostoma, 187.
Heliodoxa xanthogonys, 433.
Heliomaster longirostris, 435.
Heliothrix auriculatus, 436.
—— auritus, 434.
Helmintherus swainsoni, 331, 456.
Helodromas ochropus, 43, 253.
Hemerodromus cinctus, 416.
Hemicircus badius, 10.
Hemilophus feddeni, 152.
—— hodgei, 142.
—— hodgsoni, 150.
—— javensis, 145, 149.
—— leucogaster, 145.
Hemipipo chlorion, 299.
Hemiprocne albicincta, 437.
—— minor, 107, 437.
—— zonaris, 107.
Hemistephania johannæ, 433.
Henicocichla noveboracensis, 202.
Henicorhina leucosticta, 200.
Herodias alba, 349.
—— garzetta, 136.
—— intermedia, 136, 349.
—— torra, 135.
Herpsilochmus dorsimaculatus, 425.
—— pileatus, 424.
—— sticturus, 424.
Heterocnemis leucostigma, 427.
—— nævia, 427.
—— saturata, 427.
—— simplex, 427.
Heteropelma amazonum, 301.
—— igniceps, 301.
Hieracidea brunnea, 116.
—— novæ-zealandiæ, 116.
Hierococcyx varius, 63.

Himantopus candidus, 42, 134, 253, 347.
Hirundinea ferruginea, 297.
Hirundo albiventris, 205.
—— cayennensis, 436.
—— chalybea, 205.
—— cyanoleuca, 206.
—— erythrogaster, 205.
—— erythropygia, 59.
—— fasciata, 205.
—— filifera, 59.
—— fucata, 206.
—— leucoptera, 205.
—— melanoleuca, 206.
—— purpurea, 205.
—— riparia, 206.
—— ruficollis, 206.
—— rustica, 27, 59, 83, 360.
—— rutila, 437.
—— saturata, 112.
—— tapera, 205.
—— zonaris, 436.
Holocnemis lineata, 427.
Homorus gutturalis, 284, 285.
—— lophotes, 283.
—— unirufus, 283.
Hoplopterus ventralis, 133.
Horornis fortipes, 388.
—— pallidus, 388.
Hydrochelidon leucoptera, 47.
—— nigra, 448.
Hydrophasianus chirurgus, 134.
Hydropsalis furcifer, 439.
—— schomburgki, 439.
Hylocharis cyanea, 436.
—— sapphirina, 436.
Hylochelidon nigricans, 99.
Hylophilus luteifrons, 204.
—— muscicapinus, 204.
—— sclateri, 204.
—— thoracicus, 204.
Hyphantornis mariquensis, 345.
—— velatus, 345.
Hyphanturgus olivaceus, 344.
Hypocnemis cantator, 428.
—— lepidonota, 428.
—— leucophrys, 428.
Hypocnemis melanopogon, 428.
—— pœcilonota, 428.
—— tintinnabulata, 428.
Hypolais caligata, 388.
—— rama, 126, 388.
Hypothlypis velia, 209.
Hypotriorchis castanonotus, 391.
—— semitorquatus, 392.
Hypsipetes ourovang, 102.

Ibis chalcoptera, 415.
—— hagedash, 415.
—— melanocephalus, 136.
Icterus chrysocephalus, 218.
—— cucullatus, 448, 449.
—— —— igneus, 449.
—— —— nelsoni, 449.
—— curasoensis, 113.
—— dominicensis, 99.
—— linnæi, 113.
—— tanagrinus, 219.
—— xanthornis, 113.
Inocotis papillosus, 136.
Iodopleura fusca, 305.
—— leucopygia, 305.
—— pipra, 305.
Irrisor erythrorhynchus, 395.
—— minor, 397.
—— senegalensis, 395.
Iynx torquilla, 28, 62.

Junco bairdi, 99.

Lagopus alba alleni, 220.
—— albus, 50, 51, 176.
—— alpina, 377.
—— insularis, 224.
—— islandorum, 377.
—— mutus, 183, 379, 380.
—— reinhardti, 379.
—— ridgwayi, 50, 224.
—— rupestris, 224, 368, 375, 376, 377, 379, 380.
—— subalpina, 377.
—— welchi, 440.
Lalage sykesi, 65.
Lampornis gramineus, 432.
—— mango, 432.
—— ornatus, 433.
—— pavoninus, 433.
—— thalassinus, 321.
—— violicauda, 432.
Lamprolæma rhami, 436.
Lampropsar guianensis, 219.
—— tanagrinus, 219.
Lamprotornis superba, 412.
Laniarius cruentus, 402.
—— lagdeni, 456.
Lanio atricapillus, 211.
—— lawrencii, 272, 273.
—— versicolor, 272.
Lanius agilis, 204.
—— algeriensis, 244, 251.
—— antinorii, 401, 402.
—— atricapillus, 302, 423.
—— cayanus, 301.
—— collurio, 37.
—— cristatus, 65.
—— cruentus, 402.
—— doliatus, 424.
—— dorsalis, 401.
—— elegans, 451.
—— erythronotus, 64.
—— fallax, 451.
—— funebris, 429.
—— homeyeri, 357.
—— isabellinus, 357.
—— lahtora, 64, 65.
—— lictor, 296.
—— lunulatus, 423.
—— macrourus, 308.
—— major, 170.
—— mollis, 356.
—— nævius, 423.
—— pitangua, 296.
—— poliocephalus, 403.
—— pomeranus, 37.
—— robustus, 451.
—— sulphuratus, 296.
—— uncinatus, 451.
—— vittatus, 65.
—— (Fiscus) dorsalis, 401.
Larus affinis, 236.
—— argentatus, 86, 254.
—— audouini, 47.
—— cachinnans, 47.
—— canus, 47, 87, 161.
—— crassirostris, 195.
—— fuscus, 86, 254.
—— glaucescens, 445.
—— hemprichi, 335.
—— kumlieni, 445.
—— leucophæus, 236.
—— marinus, 86.
—— minutus, 221, 254.
—— nelsoni, 445.
—— philadelphia, 221.
—— ridibundus, 47, 254.

Larus tridactylus, 87.
Latbria cinerea, 302, 303.
—— streptophora, 303.
Legatus albicollis, 295.
Leistes americanus, 218.
—— guianensis, 218.
—— superciliaris, 279.
Leptasthenura ægithaloides, 280.
Leptopœcile sophiæ, 353.
—— —— major, 353.
Leptopogon amaurocephalus, 293.
—— nigrifrons, 293.
—— rufipectus, 234.
Leptopterus viridis, 101.
Leptoptilus argala, 135.
—— javanicus, 135.
Leptosomus discolor, 102.
Leptotodus tenuis, 446.
Ligurinus chloris, 39.
Limnocryptes gallinula, 42, 253.
Limosa ægocephala, 43, 133, 253.
Linota cannabina, 40, 245.
—— exilipes, 382, 383, 384.
—— hornemanni, 383, 384.
—— linaria, 372, 381, 382, 383, 384.
—— rufescens, 372, 381, 384.
Lipaugus cineraceus, 303.
—— simplex, 303.
Lobipluvia malabarica, 133.
Lobivanellus indicus, 133.
Lochmias nematura, 418.
—— obscurata, 418.
—— sororia, 419.
Lophoceros birostris, 62.
Loxia cinerea, 309.
—— colius, 310.
—— collaria, 214.
—— crassirostris, 214.
—— curvirostra, 40.
—— cyanea, 213.
—— erythromelas, 213.
—— franciscana, 409.
—— grisea, 215.
—— grossa, 213.
—— lineata, 214.
—— lineola, 214.
—— minuta, 214.
Loxia torrida, 214.
Loximitris dominicensis, 99.
Lullula arborea, 246.
Lurocalis semitorquatus, 438.
Lusciniola flaviventris, 388.
—— fuliginiventris, 388.
—— fuscata, 388.
—— indica, 388.
—— melanopogon, 35, 388.
—— neglecta, 388.
—— schwarzi, 388.
Lusciola africana, 226.
Lyrurus tetrix, 50.

Machærhamphus alcinus, 223.
Machetes pugnax, 43, 134, 348.
Machetornis rixosa, 279.
Machlolophus xanthogenys, 127.
Macragelæus imthurni, 218.
Macropygia timorlaoënsis, 446.
Malacocercus terricolor, 67.
Malaconotus leucotis, 205.
Manucodia comrii, 463.
Mareca penelope, 45, 137, 169, 250.
Mecocerculus leucophrys, 291.
Megalæma caniceps, 63.
Megarhynchus pitangua, 296.
Meiglyptes badiosus, 6.
—— badius, 3, 11.
—— brachyurus, 3, 10.
—— fokiensis, 12.
—— gularis, 8.
—— phaioceps, 3.
—— rufinotus, 3.
—— squamigularis, 11.
Melanetta velvetina, 231.
Melanoptila glabrirostris, 186, 187.
Melierax gabar, 391.
Melittophagus bullockoides, 315.
—— cyanostictus, 398.
—— gularis, 315.
—— lafresnayei, 226, 398.
—— leschenaulti, 315.
Melittophagus muelleri, 315.
—— pusillus, 315, 398.
—— —— cyanostictus, 398.
—— quinticolor, 315.
—— revoili, 398.
—— sonninii, 315.
Melizophilus provincialis, 454.
—— sardus, 34.
—— undatus, 34, 243.
Melophus melanicterus, 129.
Mergulus alle, 90.
Mergus merganser, 181.
—— serrator, 46, 87.
Meropogon forsteni, 103.
Merops albicollis, 104.
—— apiaster, 27, 226, 342.
—— bicolor, 103.
—— boehmi, 104.
—— breweri, 103.
—— cyanophrys, 103, 104.
—— cyanostictus, 398.
—— erythropterus, 398.
—— malimbicus, 226.
—— nubicoides, 226, 343.
—— nubicus, 226, 397.
—— ornatus, 104.
—— persicus, 61, 104, 343.
—— philippinus, 104.
—— pusillus, 398.
—— revoilii, 398.
—— sumatranus, 103.
—— superciliosus, 226.
—— variegatus, 398.
—— viridis, 60, 103
Merula confinis, 99.
—— leucops, 199.
—— maxima, 356.
—— merula, 80.
Metoponia pusilla, 112.
Micrathene whitneyi, 99.
Microcerculus bambla, 200.
—— ustulatus, 200.
Microdyptes serresiana, 108.
Microlestes arfakianus, var. minor, 446.
Micronisus gabar, 391.
Micropternus badiosus, 2, 6, 7
—— badius, 10, 15.

Micropternus brachyurus, 1, 2, 4, 5, 6, 10, 12, 15.
—— burmanicus, 3.
—— fokiensis, 1, 2, 12, 15, 16.
—— gularis, 2, 7, 9, 10, 331.
—— holroydi, 1, 2, 15, 16.
—— phæoceps, 1, 2, 3, 4, 5, 7, 16.
—— phaioceps, 3, 8, 9, 331, 332.
Milvago chimango, 282.
Milvulus tyrannus, 280, 299.
—— violentus, 299.
Milvus ægyptius, 385.
—— affinis, 385, 386.
—— govinda, 58, 385, 386.
—— ictinus, 26, 248.
—— melanotis, 385, 386.
—— migrans, 248.
—— palustris, 386.
Mimus calandria, 277.
—— gilvus, 186, 187, 199.
—— —— rostratus, 113.
Mionectes oleagineus, 293.
Mirafra africanoides, 408.
—— cantillans, 129.
—— cordofanica, 407.
—— erythrocephala, 450.
—— erythroptera, 129.
Mitrephorus aurantiiventris, 113.
Molothrus atronitens, 218.
—— badius, 278.
—— bonariensis, 278.
Monticola cinclorhynchus, 67.
—— cyanus, 37, 67.
—— rufocinerea, 404.
Montifringilla alpicola, 112.
—— nivalis, 111.
Motacilla æquinoctialis, 203.
—— æstiva, 202.
—— alba, 36, 112, 127, 170, 244.
—— auricapilla, 188.
—— calidris, 204.
—— cayana, 207.
—— cinereocapilla, 36, 127, 166.
Motacilla citreola, 127.
—— flava, 36.
—— furva, 201, 202.
—— galeata, 293.
—— guianensis, 419.
—— guira, 212.
—— lugubris, 244.
—— maderaspatensis, 126.
—— melanope, 36, 127.
—— personata, 127.
—— sulphurea, 244.
—— velia, 209.
—— xanthophrys, 324.
—— yarrellii, 83.
Mulleripicus feddeni, 152.
—— hodgei, 142.
—— hodgsoni, 150.
—— javensis, 146.
—— richardsi, 156.
Muscicapa anthoides, 430.
—— atricapilla, 37.
—— audax, 296.
—— barbata, 297.
—— carolinensis, 186.
—— cayanensis, 295.
—— cristata, 400.
—— cruenta, 305.
—— duchaillui, 400.
—— grisola, 37.
—— maculata, 18, 19.
—— nævia, 297.
—— oleaginea, 293.
—— oliva, 297.
—— pagana, 294.
—— parva, 230.
—— pica, 291.
—— pygmæa, 425.
—— rubinus, 297.
—— ruticilla, 188, 203.
—— sandwichensis, 18.
—— simplex, 303.
—— speciosa, 400.
—— striata, 202.
—— sulphurea, 295.
—— thamnophiloides, 304.
—— tyrannulus, 298.
—— varia, 298.
Muscipeta albiceps, 294.
Muscisaxicola grisea, 234.
—— juninensis, 234.
Muscivora regia, 297.
Musophaga boehmi, 114.
—— rossæ, 114.
Myiagra cervinicauda, 228.
—— ferrocyanea, 227, 228.
—— fulviventris, 316.
Myiarchus coronatus, 297.
—— ferox, 298.
—— nigriceps, 298.
—— phæonotus, 298.
—— platyrhynchus, 321.
—— tyrannulus, 298.
Myiobius barbatus, 297.
—— erythurus, 297.
—— nævius, 297.
—— roraimæ, 297.
Myiochanes ardesiacus, 298.
Myiodynastes audax, 296.
Myiopatis pusilla, 294.
—— wagæ, 234.
Myiophoneus borneensis, 124.
—— (Arrenga) melanurus, 123.
Myiothera analis, 429.
—— nematura, 418.
—— umbretta, 419.
Myiozetetes cayennensis, 295.
—— sulphureus, 295.
Myrmeciza atrothorax, 428.
—— cinnamomea, 427.
Myrmonax cinnamomeus, 427.
—— leucophrys, 428.
Myrmornis crissalis, 429.
—— hoffmanni, 429.
Myrmothera axillaris, 425.
—— unicolor, 426.
Myrmotherula axillaris, 425.
—— cinereiventris, 426.
—— guttata, 425.
—— gutturalis, 425.
—— longipennis, 426.
—— menetriesi, 426.
—— pygmæa, 425.
—— surinamensis, 425.
—— unicolor, 426.
Myzomela annabellæ, 445.
—— erythrina, 227.
—— melanocephala, 227.
—— wakoloensis, 228, 456.

Nasica guttatoides, 422.
Nectarinia habessinica, 98, 406.
—— ludovicensis, 98.
Nemoricola indica, 194.
Nemosia guira, 212.
—— nigrigenys, 215.
—— pectoralis, 234.
Neocichla gutturalis, 98.
Neophron gingimianus, 54.
Neopipo cinnamomea, 301.
—— rubicunda, 301.
Nesospingus speculiferus, 273, 274.
Nettapus coromandelianus, 137.
Nilaus edwardsi, 322.
Ninox goldiei, 138, 139.
—— maculata, 139, 270.
—— novæ-zealandiæ, 139.
—— odiosa, 227.
—— theomacha, 138, 139.
Nisaetus fasciatus, 248.
Nisus gabar, 391.
Noctua glaux, 392.
—— veterum, 392.
Notauges albicapillus, 413.
—— fischeri, 226.
—— hildebrandti, 412.
—— superbus, 412, 413.
Nothura maculosa, 282.
Numenius arquata, 43, 85, 253.
—— lineatus, 134.
—— longirostris, 324.
—— minor, 363.
—— phæopus, 85, 173, 254.
—— tenuirostris, 253.
Numida vulturina, 414.
Nyctale tengmalmi, 258, 259, 260.
Nyctea scandiaca, 261.
Nyctibius bracteatus, 438.
—— grandis, 437.
—— jamaicensis, 438.
—— longicaudatus, 437.
—— rufus, 438.
Nycticorax griseus, 44, 136.
—— leuconotus, 349.
Nyctidromus albicollis, 439.
Nyctiornis amictus, 103.
Nyctiornis athertoni, 103.
Nyroca ferruginea, 138.

Ochthœca consobrina, 289.
—— setophagoides, 289, 291.
Œdemia fusca, 46, 173.
—— nigra, 46.
Œdicnemus dominicensis, 225.
—— scolopax, 41, 133, 252.
Œstrelata defilippiana, 448, 449.
—— fisheri, 448, 449.
Onychotes gruberi, 448, 450.
Opisthocomus cristatus, 118.
Orchesticus ater, 213.
Oreopyra calolæma, 316.
—— cinereicauda, 317.
Oriolus chrysocephalus, 218.
—— galbula, 37.
—— guianensis, 218.
—— indicus, 69.
—— kundoo, 68.
—— melaleucus, 211.
—— oryzivorus, 219.
—— persicus, 217.
—— picus, 422.
—— viridis, 217.
Ornithion inerme, 293.
—— pusillum, 294.
Ornysmya caniveti, 191.
—— delphinæ, 434.
Orthnocichla subulata, 115.
Orthogonys cyanicterus, 211.
Orthotomus subulatus, 115.
Ortygornis pondiceriana, 131.
Oryzoborus crassirostris, 214.
—— nuttingi, 110.
—— salvini, 110.
—— torridus, 214.
Ostinops decumanus, 217.
—— viridis, 217.
Otis tarda, 252.
Otocorys albigula, 354.
—— alpestris, 174, 380, 381.
—— bilopha, 315.
Otogyps calvus, 53.
Oxypogon stuebelii, 446.
Oxyrhamphus hypoglaucus, 291.

Pachycephala affinis, 446.
—— fuscoflava, 316.
—— xanthoprocta, 270.
Pachyrhamphus atricapillus, 302.
—— griseigularis, 302.
—— niger, 302.
—— viridis, 302.
Palæornis eupatria, 62.
—— purpureus, 62.
—— torquatus, 62.
Pandion haliaëtus, 26, 164, 186, 249.
Panyptila cayennensis, 436.
Paradisea apoda, 230.
Paroaria cucullata, 277.
—— gularis, 216.
—— nigrigenis, 215.
Parra gymnostoma, 225.
—— indica, 134.
Parula americana, 187, 188.
—— pitiayumi, 202.
Parus afer, 327, 407.
—— americanus, 187.
—— ater, 35.
—— borealis, 122, 158.
—— cæruleus, 36.
—— cinctus, 172.
—— cinerascens, 121, 122, 123, 327.
—— cinereus, 121.
—— cyanus, 318.
—— flavipectus, 318.
—— fringillinus, 226.
—— major, 35, 243, 359.
—— nipalensis, 127.
—— palustris, 122.
—— pleskei, 318.
—— sarawacensis, 327.
—— teneriffæ, 243.
—— thruppi, 390, 406.
Passer domesticus, 82, 112, 129, 245.
—— italiæ, 39.
—— montanus, 82, 452.
—— salicicolus, 112.
—— saturatus, 452.
Passerculus alaudinus, 449.
—— anthinus, 449.
—— beldingi, 448.
—— sandwichensis, 449.
—— —— bryanti, 449.

Pastor roseus, 128.
Pavo cristatus, 131.
Pelargopsis gurial, 61.
Pelecanus, sp. inc., 48.
Perenostola leucostigma, 427.
Perdicula argoondah, 131.
—— asiatica, 131.
Perdix cinerea, 106.
Pericrocotus erythropygius, 66.
—— peregrinus, 65.
Perisoreus infaustus, 180.
Peristera jamaicensis, 193.
Pernis ptilonorhynchus, 58.
Petasophora delphinæ, 434.
—— germana, 434.
—— serrirostris, 436.
Petrochelidon pyrrhonota, 277.
—— timoriensis, 324.
Petrœca multicolor, 270.
Petronia stulta, 40.
Peucæa arizonæ, 450.
—— mexicana, 448, 450.
Phacellodomus ruber, 281.
Phaethornis augusti, 431.
—— bourcieri, 431.
—— longuemareus, 431.
—— pygmæus, 431.
—— superciliosus, 431.
Phaeton rubricauda, 268.
Phaiopicus badiosus, 6.
—— blythii, 3.
—— brachyurus, 10, 11.
—— jerdoni, 8.
—— rufinotus, 3.
Phalacrocorax æolus, 270.
—— bicristatus, 271.
—— capillatus, 271.
—— carbo, 91, 249, 270.
—— fuscicollis, 138.
—— graculus, 48, 91.
—— pelagicus, 270, 271.
—— pygmæus, 138.
—— urile, 271.
Phalaropus fulicarius, 106.
—— hyperboreus, 171, 177.
Phasianus colchicus, 41.
—— satscheunensis, 111.
—— strauchi, 111.
—— tarimensis, 111.
—— vlangalli, 111.
Philydor albogularis, 420.
—— erythrocercus, 420.
—— pyrrhodes, 420.
—— turdinus, 420.
Phœnicocercus carnifex, 304.
Phœnicophilus dominicensis, 99.
Phœnicopterus roseus, 44, 250.
—— ruber, 186.
Phœnicosoma azaræ, 211.
Phœnicothaupis peruvianus, 234, 272.
—— rhodinolæma, 272.
Phœnisoma ardens, 211.
Pholeoptynx cunicularia, 282.
Pholidauges bicolor, 411.
Phonipara bicolor, 118.
—— fumosa, 118, 215.
—— phæoptila, 118, 215.
—— pusilla, 190, 321.
Phyllomyias cristatus, 222.
—— semifusca, 293.
Phylloscopus affinis, 388.
—— humii, 388.
—— indicus, 126.
—— plumbeitarsus, 387.
—— presbytis, 387, 388.
—— rufus, 35, 243, 387.
—— ——, var. obscurus, 112.
—— seebohmi, 387.
—— tristrami, 387.
—— trochiloides, 387, 388.
—— trochilus, 35, 243.
—— tytleri, 388.
—— viridanus, 387.
—— viridipennis, 387.
Picolaptes albolineatus, 422.
—— puncticeps, 422.
Picumnus lawrencii, 99.
Picus badiosus, 6.
—— badius, 10.
—— brachyurus, 10.
—— certhia, 421.
—— crawfurdi, 141, 149.
—— dubius, 192.
—— fokiensis, 12.
—— gularis, 8.
—— hemprichii, 393.
—— hodgei, 142.
—— hodgsonii, 150.
—— holroydi, 15.
—— horsfieldii, 145.
—— javensis, 145.
Picus jerdoni, 152.
—— leptorhynchus, 357.
—— leucogaster, 145. 149, 150, 151.
—— mahrattensis, 62.
—— major, 172.
—— maximus malayensis, 145, 151.
—— nubicus, 393.
—— rufinotus, 3.
—— rufus, 3.
—— scalaris, 191.
—— squamigularis, 11.
—— villosus, 455.
Piezorhynchus brodiei, 228.
—— browni, 228.
—— medius, 114.
—— richardsii, 227.
Pinaroloxias inornata, 324.
Pinicola enucleator, 168.
Pionias crassus, 116.
—— rueppelli, 98.
—— rufiventris, 393.
Pipilo mystacalis, 275.
Pipra albifrons, 428.
—— aureola, 299.
—— aurocapilla, 300.
—— caudata, 300.
—— cinnamomea, 301.
—— cornuta, 299.
—— gutturalis, 103, 300.
—— iracunda, 300.
—— laplacii, 305.
—— leucocephala, 291.
—— leucocilla, 300.
—— manacus, 301.
—— rupicola, 304.
—— serena, 300.
—— suavissima, 300.
—— virescens, 300.
Pipreola whitelyi, 304.
Piprites chlorion, 299.
Pitangus bellicosus, 280.
—— lictor, 296.
—— parvus, 296.
—— sulphuratus, 296.
Pithys albifrons, 428.
—— leucophrys, 428.
—— pectoralis, 429.
—— rufigula, 428.
Pitta mackloti, 447.
—— macularia, 430.
Pitylus canadensis, 213.
—— celæno, 227.
—— erythromelas, 213.
—— grossus, 213.
—— viridis, 213.
Platalea ajaja, 186.

Platalea leucorodia, 136.
—— tenuirostris, 350.
Platycercus alpinus, 99.
—— novæ-zealandiæ, 99.
—— pennanti, 48.
—— ——, var. nobbsi, 49.
Platyrhynchus coronatus, 292.
—— flaviventris, 295.
—— mystaceus, 292.
—— ruficauda, 296.
—— saturatus, 292.
—— sulphurescens, 295.
—— superciliaris, 292.
Plectrophanes lapponica, 164.
—— nivalis, 167.
Plectrophenax hyperboreus, 231.
Plegadis falcinellus, 250. 349.
Ploceus bengalensis, 128.
—— manyar, 128.
—— philippinus, 128.
Plotus melanogaster, 138.
Podager nacunda, 282, 438.
Podiceps capensis, 418.
—— cristatus, 46, 255, 350.
—— fluviatilis, 418.
—— —— capensis, 418.
—— infuscatus, 232.
—— minor, 138, 351, 358, 418.
—— nigricollis, 46, 255.
Podoces hendersoni, 353.
Pœcilonitta erythrorhyncha, 415.
Pœcilotriccus lenzi, 222.
Pœocephalus robustus, 322.
—— rufiventris, 393.
Pogonothraupis atricapillus, 211.
Polemistria pavonina, 433.
Poliohierax semitorquatus, 391, 392, 410.
Polioptila lactea, 324.
—— sclateri, 324.
Polyborus tharus, 282.
Pomarea castaneiventris, 228.
—— rufocastanea, 228.
—— ugiensis, 227.
Poospiza nigrorufa, 277.
Porphyrio alleni, 346.
Porphyrio cæruleus, 252.
—— melanotus, 270.
—— poliocephalus, 111, 135.
—— veterum, 111.
Porzana akool, 135.
—— bailloni, 135, 346.
—— leucogaster, 110.
—— maruetta, 44, 252.
Pratincola caprata, 124.
—— indica, 124.
—— rubetra, 32.
—— rubicola, 32, 242.
—— sybilla, 102.
Premnocopus undulatus, 421.
Prinia inornata, 126.
Prionops cristatus, 403
—— poliocephalus, 403.
Pristorhamphus versteri, 316.
Procellaria glacialis, 92.
—— leucorrhoa, 254.
Procnias tersa, 207.
—— ventralis, 208.
Progne chalybea, 205, 277.
—— purpurea, 205.
—— tapera, 205, 277.
Promerops melanorhynchus, 395.
—— minor, 397.
Psalidoprocne antinorii, 232, 456.
Pseudogyps bengalensis, 54.
Pseudoleistes virescens, 279.
Psittacus erithacus, 322.
—— rubrovarius, 322.
Psittasoma michleri zeledoni, 113.
Psophia cantatrix, 222.
—— leucoptera, 222.
Pterocles arenarius, 131, 357.
—— exustus, 131.
—— fasciatus, 131.
—— gutturalis, 346.
Pterolestes augur, 391.
Ptilopus lewisi, 227.
—— richardsi, 228.
—— solomonensis, 316.
Ptyonoprogne concolor, 60.
Puffinus anglorum, 48, 94, 254, 361.
—— assimilis, 269.
—— kuhli, 47, 48, 255.
—— sphenurus, 268.
Puffinus yelkouan, 48.
Pycnonotus barbatus, 244.
—— hæmorrhous, 68.
—— layardi, 344.
Pyctorhis sinensis, 67.
Pygmornis longuemareus, 431.
—— pygmæus, 431.
Pygosceles antipodum, 108.
Pyranga æstiva, 210, 211.
—— ardens, 211.
—— cyanicterus, 211.
—— hæmalea, 211.
—— roseigularis, 186, 190.
—— rubra, 234.
Pyrgilauda kansuensis, 111.
Pyrgisoma albiceps, 275.
—— rubricatum, 275.
Pyrgita petronia, 353.
Pyrgitopsis ammodendri, 354.
Pyriglena funebris, 429.
—— leucoptera, 429.
—— tyrannina, 427.
Pyrocephalus rubineus, 280, 297.
Pyroderus orenocensis, 306.
—— scutatus, 306.
Pyromelana franciscana, 409.
—— oryx, 345.
—— taha, 345.
Pyrrhocorax alpinus, 38.
—— graculus, 38, 245.
Pyrrhula orientalis, 107.
—— rosacea, 107.
Pyrrhulauda grisea, 130.

Querquedula circia, 45, 137, 358.
—— crecca, 45, 137, 172, 250, 358.
—— eatoni, 320.
—— erythrorhyncha, 415.
Querula cruenta, 305.
—— minor, 302.
Quiscalus lugubris, 219.

Rallus aquaticus, 44.
—— indicus, 135.
Recurvirostra avocetta, 134.
Regulus cristatus, 34.
—— ignicapillus, 34.
—— satrapa, 448.
Rhamphocænus albiventris, 426.

Rhamphocœlus jacapa, 210.
Rhamphopis atrococcineus, 210.
Rhea americana, 283.
—— darwini, 229.
Rhectes analogus, 230.
—— leucorhynchus, 447.
Rhinopomastes cabanisi, 397.
—— minor, 397.
Rhinoptilus cinctus, 416.
—— gracilis, 416.
Rhipidura aureola, 66.
—— cockerelli, 227.
—— leucothorax, 228.
—— pelzelni, 270.
Rhodostethia rosea, 443.
Rhopophilus albo-superciliaris, 355, 356.
—— deserti, 111, 354, 355, 356.
—— pekinensis, 354, 355, 356.
—— ——, var. major, 354, 355.
—— superciliaris, 356.
Rhopoterpe guttata, 425.
—— torquata, 429.
Rhyacophilus glareola, 134.
Rhynchæa bengalensis, 133.
Rhynchocyclus flaviventris, 295.
—— ruficauda, 296.
—— sulphurescens, 295.
Rissa brevirostris, 117.
—— kotzebui, 117.
—— tridactyla, 254.
Rupicola crocea, 304.
—— peruviana, 318.
—— sanguinolenta, 318.
—— saturata, 318.
Rupornis gracilis, 450.
—— griseicauda, 193.
—— ridgwayi, 225.
—— ruficauda griseicauda, 450.
Ruticilla erythrogastra, 356.
—— moussieri, 241, 242.
—— ochruros, 112.
—— phœnicurus, 32.
—— rufiventris, 125.
—— tithys, 237.
—— titys, 32.

Salicaria leucoptera, 406.
Saltator ater, 213.
Saltator cærulescens, 213.
—— magnus, 213.
—— olivascens, 213.
Sarcidiornis melanonotus, 136.
Sarcorhamphus æquatorialis, 440.
—— gryphus, 440.
Sauropatis australasiæ, 445.
Sauropbagus lictor, 296.
—— sulphuratus, 296.
Saxicola cypriaca, 229.
—— deserti, 125, 405.
—— isabellina, 125, 405.
—— morio, 229.
—— œnanthe, 32, 80.
—— opistholeuca, 125.
—— phillipsi, 390, 404.
—— rufocinerea, 404.
—— salina, 356.
—— seebohmi, 405.
—— stapazina, 446.
Scaphidura atra, 219.
Scaphorhynchus audax, 296.
Sceloglaux albifacies, 99.
Schizorhis leopoldi, 456.
—— leucogastra, 322, 400.
Sclerurus brunneus, 419.
—— caudacutus, 419.
Scolopax gallinago, 86.
—— rusticula, 42,86,253.
Scops capensis, 342.
—— giu, 26, 263.
—— minutus, 139.
—— pennanti, 59.
—— stictonotus, 194.
Scotopelia oustaleti, 322.
Selasphorus flammula, 231.
—— torridus, 231.
Sericossypha albocristata, 234.
Serinus hortulanus, 39, 245.
—— pectoralis, 109.
Serphophaga pectoralis, 293.
Setophaga auricapillus, 203.
—— brunneiceps, 204.
—— castaneocapilla, 203.
—— guatemalæ, 324.
—— ruticilla, 188, 203.
—— verticalis, 203.
Sigmodus mentalis, 116.
Siphia tickelliæ, 66.
Sitta cæsia, 241, 243.
Sitta eckloni, 111.
—— nævia, 427.
—— surinamensis, 425.
—— whiteheadi, 28, 455.
Sittasomus olivaceus, 421.
Siurus auricapillus, 188.
—— noveboracensis, 202.
Somateria mollissima, 87.
—— spectabilis, 88.
Spatula clypeata, 45, 137, 250.
Speculipastor bicolor, 411.
Spermophila castaneiventris, 214.
—— collaria, 214.
—— grisea, 215.
—— gutturalis, 215.
—— hypoxantha, 277.
—— lineata, 214.
—— lineola, 214.
—— minuta, 214.
—— plumbea, 215.
Spheniscus demersus, 104, 108.
Spindalis benedicti, 321.
—— exsul, 189.
—— pretrii, 189.
—— zena, 189.
Spizalauda deva, 130.
Spizella atrigularis, 114.
—— pusilla, 114.
—— wortheni, 114.
Sporophila americana, 214.
—— castaneiventris, 214.
Spreo albicapillus, 413.
Squatarola helvetica, 253.
Starna robusta, 106.
Steatornis caripensis, 439.
Stelgidopteryx ruficollis, 206.
Stenopsis cayennensis, 439.
—— ruficervix, 439.
Stenostira scita, 344.
Stephanibyx coronata, 417.
Stercorarius catarrhactes, 87.
—— crepidatus, 87.
—— parasiticus, 167.
Sterna arctica, 87.
—— cantiaca, 47.
—— fluviatilis, 46, 254.
—— fuliginosa, 266.
—— macrura, 170.
—— melanogaster, 138.
—— minuta, 335.
—— seena, 138.

Stictopicus nubicus, 394.
Stigmatops albo-auricularis, 227.
—— kebirensis, 446.
—— salvadorii, 446.
Stoparola melanops, 66.
Strepsilas interpres, 85.
Streptopelia torquatus, 357.
Strix flammea, 26, 247, 255.
—— lacteus, 392.
Struthio australis, 229.
—— molybdophanes, 229.
Sturnella ludoviciana, 219.
—— —— meridionalis, 219.
Sturnia pagodarum, 128.
Sturnus nitens, 111.
—— poltoratzkyi, 106, 111.
—— purpurascens, 111, 353.
—— unicolor, 111, 245.
—— vulgaris, 38, 82, 111, 128, 245.
Sula bassana, 91, 249.
—— dactylatra, 108.
—— nebouxi, 108.
—— personata, 269.
Surnia ulula, 260.
Sutoria sutoria, 126.
Sycalis brasiliensis, 217.
—— citrina, 217.
—— flaveola, 217.
—— luteola, 278.
—— minor, 217.
—— pelzelni, 278.
Sylvia affinis, 126, 387.
—— atricapilla, 34.
—— cinerea, 33.
—— conspicillata, 33.
—— curruca, 33.
—— elata, 294.
—— hortensis, 181, 365.
—— jerdoni, 126.
—— melanocephala, 33, 243, 454.
—— minuscula, 387.
—— mystacea, 112.
—— nisoria, 230, 453, 454.
—— pectoralis, 293.
—— pitiayumi, 202.
—— subalpina, 33.
Symmorphus leucopygius, 270.
Synallaxis adusta, 419.
Synallaxis albescens, 419.
—— brunneicauda, 419.
—— cinnamomea, 419.
—— demissa, 420.
—— frontalis, 419.
—— guianensis, 419.
—— modesta, 286.
—— patagonica, 285.
—— paucalensis, 234.
—— phryganophila, 280.
—— ruficapilla, 419.
—— ruficauda, 419.
—— sordida, 281, 285.
Sypheotis aurita, 132.
Syrnium aluco, 247.
—— bohndorffi, 116.
—— lapponicum, 255.
—— uralense, 256.

Taccocua leschenaulti, 64.
Tachybaptes fluviatilis, 46, 255.
Tachycineta albiventris, 205.
Tachyphonus atricapillus, 272.
—— cristatus, 212.
—— delattrii, 273.
—— intercedens, 212.
—— luctuosus, 211.
—— melaleucus, 211.
—— napensis, 273.
—— nattereri, 273.
—— nigerrimus, 211.
—— ochropygos, 212.
—— phœniceus, 212.
—— surinamus, 212, 273.
—— —— napensis, 273.
Tadorna casarca, 137.
Tæniopterа dominicana, 279.
Tanagra æstiva, 210.
—— archiepiscopus, 210.
—— atra, 213.
—— atricapilla, 211.
—— cristatella, 273.
—— cristatus, 212.
—— cyana, 208, 209.
—— cyanea, 190.
—— episcopus, 210.
—— erythrorhyncha, 410.
—— flaviventris, 210.
—— guianensis, 205.
—— gyrola, 209.
—— jacapa, 210.
—— jacarina, 215.
—— macroura, 311.
Tanagra magna, 213.
—— nigricollis, 208.
—— palmarum, 210.
—— punctata, 209.
—— serioptera, 210.
—— silens, 212.
—— tatao, 209.
—— violacea, 208.
Tanagrella velia, 209.
Tantalus hagedash, 415.
—— leucocephalus, 136.
Telephonus erythropterus, 244.
—— jamesi, 390, 403.
Temnurus roseigaster, 99.
Tephrodornis pondicerianus, 65.
Terenura spodioptila, 426.
Terpsiphone cristata, 400.
—— ferreti, 400.
—— melanogastra, 400.
—— paradisi, 66.
Tetrao mutus, 84.
—— tetrix, 452.
—— urogalloides, var. sachalensis, 224.
Textor dinemelli, 390, 392, 409.
—— intermedius, 410.
—— scioanus, 232.
Thalassidroma leucorrhoa, 95, 361.
—— pelagica, 95.
Thalurania furcata, 433.
Thamnobia cambaiensis, 124.
Thamnolæa rufocinerea, 404.
Thamnomanes glaucus, 424.
Thamnophilus amazonicus, 423.
—— argentinus, 281.
—— atricapillus, 423.
—— berlepschi, 234.
—— caudacutus, 419.
—— cirrhatus, 423.
—— doliatus, 424.
—— fuliginosus, 423.
—— insignis, 424.
—— lineatus, 423.
—— lunulatus, 423.
—— major, 423.
—— murinus, 423.
—— nævius, 423.
—— ruficollis, 423.
Thaumatias linnæi, 435.
—— tobaci, 435.
Thraupis olivascens, 210.

Threnœdus militaris, 305.
—— rubricollis, 306.
Thriponax crawfurdi, 141, 149, 150, 153.
—— feddeni, 141, 148, 149, 150, 152.
—— hargitti, 141, 155, 156.
—— hodgei, 141, 142.
—— hodgsoni, 141, 150, 151, 152, 157.
—— javensis, 141, 145, 146, 147, 149, 150, 151, 155.
—— jerdoni, 141, 152.
—— leucogaster, 141.
—— pectoralis, 141, 143.
—— richardsi, 142, 156.
Thryophilus leucotis, 201.
—— minlosi, 222.
Thryothorus albipectus, 201.
—— coraya, 201.
—— martinicensis, 201.
—— platensis, 201.
—— rufulus, 201.
Tiaris pusilla, 190.
Tichodroma muraria, 357, 446.
Timolia lerchi, 317.
Tinnunculus alaudarius, 25, 249, 392.
—— cenchris, 249, 342.
—— rupicoloides, 342.
—— tinnunculus, 392.
Tityra cayana, 301.
Todirostrum cinereum, 292.
—— maculatum, 292.
—— ruficeps, 222.
—— rufigene, 222.
—— signatum, 292.
Todus angustirostris, 99.
—— cinereus, 292.
—— ferrugineus, 297.
—— maculatus, 292.
—— regius, 297
—— subulatus, 99.
Topaza pella, 432.
Totanus calidris, 43, 134, 253, 357, 363.
—— canescens, 43.
—— fuscus, 134.
—— glareola, 43, 164, 348.
—— glottis, 134, 195.
—— hypoleucus, 85.
—— ochropus, 134.
—— pugnax, 364.
—— stagnatilis, 134.
Trachyphonus erythrocephalus, 394.
Treron delalandii, 345.
—— waalia, 414.
Triccus cinereus, 292.
Tricholæma melanocephala, 394.
—— stigmatothorax, 394.
Tringa alpina, 42, 86.
—— canutus, 440.
—— macularia, 194.
—— minuta, 42, 134, 348.
—— subarquata, 43.
—— temmincki, 42, 164.
Tringoides hypoleucus, 43, 134, 253, 348.
—— macularius, 194.
Trochilus amethystinus, 434.
—— anais, 434.
—— augusti, 431.
—— auriculatus, 436.
—— auritus, 434.
—— bicolor, 436.
—— bourcieri, 431.
—— brasiliensis, 431.
—— brevirostris, 436.
—— cæruleus, 435.
—— cyaneus, 436.
—— dominicus, 431.
—— furcatus, 433.
—— hirsutus, 431.
—— johannæ, 433.
—— largipennis, 432.
—— leucogaster, 435.
—— longirostris, 435.
—— longuemareus, 431.
—— mango, 432.
—— mellivorus, 433.
—— moschitus, 434.
—— ornatus, 433.
—— pectoralis, 432.
—— pella, 432.
—— petasophorus, 436.
—— platurus, 434.
—— pygmæus, 431.
—— recurvirostris, 433.
—— rivolii, 436.
—— rubineus, 436.
—— sapphirinus, 436.
—— superciliosus, 431.
—— tobaci, 435.
—— violicauda, 432.
—— virescens, 435.
—— viridis, 435.
—— viridissimus, 435.
Troglodytes beani, 321.
Troglodytes borealis, 76, 365, 376.
—— furvus, 201.
—— hirtensis, 80, 359.
—— parvulus, 32, 244.
—— —— borealis, 81.
—— —— fumigatus, 81.
—— —— nipalensis, 81.
—— —— pallescens, 81.
—— rufulus, 201.
Tropidorhynchus aruensis, 446.
Turdinus sepiarius, var. minor, 446.
Turdus albiventris, 198.
—— aliciæ, 197.
—— atricapillus, 199.
—— atrothorax, 428.
—— cantator, 428.
—— carbonarius, 198.
—— cinnamomeus, 427.
—— coraya, 201.
—— flavipes, 198.
—— fumigatus, 198.
—— fuscescens, 196.
—— gilvus, 199.
—— griseus, 426.
—— gymnophthalmus, 198.
—— ignobilis, 198.
—— iliacus, 80, 159.
—— leucops, 199.
—— merula, 37, 242.
—— murinus, 197.
—— musicus, 36, 80, 242.
—— mystacinus, 356.
—— phæopygus, 197.
—— pilaris, 37, 159.
—— roraimæ, 198.
—— rufigularis, 428.
—— rufiventris, 277.
—— surinamus, 212.
—— swainsoni, var. ustulatus, 197.
—— torquatus, 37.
—— ustulatus, 197.
—— viscivorus, 36, 242.
Turnix dussumieri, 132.
—— joudera, 132.
—— lepurana, 346.
—— sylvatica, 251.
—— taigoor, 132.
Turtur communis, 41.
—— meena, 130.
—— risorius, 130.
—— senegalensis, 130.
—— suratensis, 130.
—— tranquebaricus, 131.
Tylas eduardi, 101.

Tyranneutes brachyurus, 300.
—— Tyranniscus acer, 294.
—— gracilipes, 294.
—— griseiceps, 294.
Tyrannula ardesiaca, 298.
—— setophagoides, 291.
Tyrannulus elatus, 294.
Tyrannus albicollis, 295.
—— luggeri, 295.
—— melancholicus, 280, 299.
—— rufinus, 299.

Ulula aluco, 257.
Upupa epops, 28, 64, 357, 397.
—— —— senegalensis, 397.
—— erythrorhynchus, 395.
—— senegalensis, 397.
Uræginthus ianthinogaster, 408.
Uranomitra viridifrons, 317.
Uria bruennichi, 89.
—— grylle, 89.
—— troile, 89.
Urocharis longicauda, 316.
Urogallus urogallus, 50.
Urolestes melanoleucus, 344.
Urubitinga anthracina, 193.

Vanellus capella, 97.
—— cayennensis, 282.
—— vulgaris, 42, 253.
Vidua verreauxi, 345.
Vireo agilis, 204.
—— approximans, 114.
—— bairdi, 321.
—— calidris, 204.
—— magister, 186, 188, 321.
Vireolanius leucotis, 205.
—— pulchellus verticalis, 449.
Vireosylvia agilis, 204.
—— cinerea, 321.
—— grandior, 114.
—— magister, 188.
Volatinia jacarina, 215.
—— splendens, 215.
Vultur monachus, 53.

Xanthocorys nattereri, 324.
Xanthodina pyrgita, 408.
Xantholæma hæmacephala, 63.
Xanthornus decumanus, 217.
Xanthosomus flavus, 278.
—— icterocephalus, 218.
Xanthotis rubiensis, 230.
Xema sabinii, 222, 455.
Xenopipo atronitens, 299.
Xenops dentirostris, 421.
—— genibarbis, 420.
Xenorhynchus asiaticus, 135.
Xipholena pompadora, 305.
Xiphorhynchus trochilirostris, 422.

Zenaida maculata, 282.
—— ruficauda, 113.
—— vinaceo-rufa, 113.
Zonotrichia matutina, 216.
—— pileata, 216, 278.
Zosterops brunneicauda, 316.
—— fuscifrons, 228.
—— incerta, 446.
—— longirostris, 227.
—— madagascariensis, 101.
—— palpebrosa, 127.
—— tenuirostris, 270.
—— uropygialis, 316.

END OF VOL. III.

PRINTED BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.

FIFTH SERIES.
Vol. III. No. 9.
JANUARY 1885.
Price 6s.

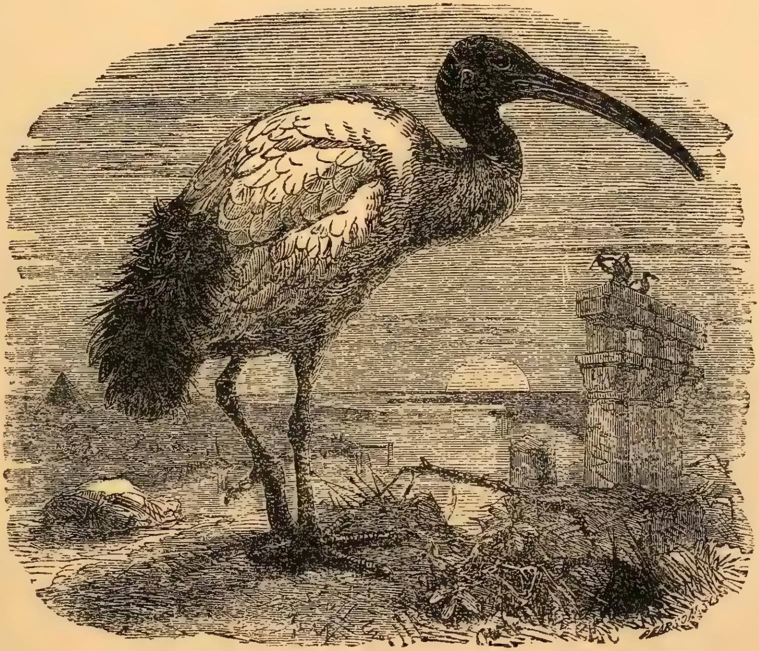
THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY TO THE ZOOLOGICAL SOCIETY OF LONDON,
AND
HOWARD SAUNDERS, F.L.S., F.Z.S.



LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

CONTRIBUTIONS

À LA

FAUNE ORNITHOLOGIQUE DE L'EUROPE OCCIDENTALE.

Recueil comprenant les espèces d'oiseaux qui se reproduisent dans cette région, ou qui s'y montrent régulièrement de passage; augmenté de la description des principales espèces exotiques les plus voisines des indigènes, ou susceptibles d'être confondues avec elles; ainsi que l'énumération des races domestiques.

Par LÉON OLPHE-GALLIARD.

Fascicule premier: ANSERES BREVIPENNES.

Bayonne: Lasserre. Paris: J. B. Baillière et Fils. Berlin:
Friedländer und Sohn. In 8°. 1884.

Now ready, Price 30*s.*

A GENERAL INDEX OF THE FIRST THREE SERIES OF 'THE IBIS,'

1859-1876.

Edited by Osbert Salvin, M.A., F.R.S.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

Now published.

A LIST OF THE DIURNAL BIRDS OF PREY,

WITH REFERENCES AND ANNOTATIONS;

ALSO,

A RECORD OF SPECIMENS PRESERVED IN THE NORFOLK AND NORWICH MUSEUM.

By JOHN HENRY GURNEY.

In 8vo, paper covers 4*s.* 6*d.*, cloth 5*s.*

JOHN VAN VOORST, 1 PATERNOSTER ROW, E.C.

Now ready.

A NEW LIST OF BRITISH BIRDS.

A List of British Birds compiled by a Committee of the British Ornithologists' Union. 229 pp. 8vo. Price 10*s.* 6*d.*

London: John Van Voorst, 1 Paternoster Row, E.C.

Members of the British Ornithologists' Union can obtain the above of Mr. R. H. Porter, 6 Tenterden Street, Hanover Square, W., at the reduced price of 7*s.* 6*d.* cash.

CONTENTS OF NUMBER IX. (*continued*).

30. Reichenow on Parrots 112
31. Ridgway on new Birds from the Commander Islands and Petropaulovski . . . .
32. Ridgway on new Costa-Rican Birds 113
33. Ridgway on West-Indian Birds . . . .
34. Ridgway on a new Field-Sparrow 114
35. Robson on the Breeding of the Eastern Golden Plover .
36. Schalow on a new Plantain-eater. . . . .
37. Sharpe on the Birds of the Voyage of the 'Alert' . . .
38. Sharpe on various Timeliidæ 115
39. Sharpe on a new Wren from Timor . . . .
40. Sharpe on Birds from New Guinea . . . .
41. Sharpe on Birds from Equatorial Africa . . . .
42. Shufeldt on the forms of the Patella in Birds 116
43. Smith on the *Hieracideæ* . . . .
44. Souza on *Bucorax pyrrhops*. . . . .
45. Stejneger on the Natural History of the Commander Islands
46. Stejneger on the Genus *Cepphus* 117
47. Travers on the Organic Productions of New Zealand . .

X. Letters, Extracts, Announcements, &c.:—

Letters from Mr. L. M. Turner and Messrs. Salvin and Godman; Singular Development of *Opisthocomus*; The National Bird-Collection at Washington; Ornithological Works in Progress; Proceedings of the Ridgway Ornithological Club 117

Publications received since the issue of No. 8, Fifth Series, and not noticed in the present Number.

1. 'The Auk.' Vol. I. Nos. 3, 4.
2. Berlepsch. Untersuchungen über die Vögel der Umgegend von Bucaramanga in Neu-Granada. (J. f. O. 1884.)
3. Blasius. Neue Thatsachen in Betreff der Ueberreste von *Alca impennis*, Linn. (Tageblatt d. Naturf. Versamm. zu Magdeburg, 1884.)
4. Blasius. Ornithologische Forschungen. (J. f. O. 1884.)
5. Blasius. Ueber einen vermuthlich neuen Trompeter-Vogel von Bolivia. (J. f. O. 1884.)
6. Blasius. Ueber Vogel-Brustbeine. (J. f. O. 1884.)
7. Böhm's Reisen in centralem Ostafrika. (Zeitsch. f. ornith. und practische Geflügelz, 1884.)
8. Bolam. Red-breasted Flycatcher in Northumberland. (The Naturalist, Aug. 1884.)
9. Catalogue of the Natural History Collections of the Albany Museum, Grahamstown. (8vo. Cape Town, 1883.)
10. Collett. Ueber *Alca impennis* in Norwegen. (Mitth. ornith. Ver. in Wien, 1884.)
11. Gurney. Catalogue of the Birds of Norfolk. (8vo. London, 1884.)
12. Hawtayne. Taxidermic and other Notes. (12mo. Demerara, 1884.)
13. Henke. Beitrag zur Lösung der Straussenfrage. (Zeitsch. f. d. gesammte Ornithol. i. 1884.)
14. Huet. Note sur les naissances, dons et acquisitions de la Ménagerie du Muséum d'Histoire Naturelle. (Bull. Soc. Nat. Acclim. France, 1884.)
15. Le Moine. Canadian Ornithology. (Quebec, 1884.)
16. Report on the Migration of Birds. 1883.
17. Salvadori. Uccelli dello Scioa e della regione fra Zeila e la Scioa. (Annali Mus. Civ. d. Stor. Nat. Genova, ser. 2, vol. i.)
18. Smithsonian Report. 1882.
19. Stejneger. On the use of Trinomials in American Ornithology.

CONTENTS OF NUMBER IX.—FIFTH SERIES.

Page
I. Notes on Woodpeckers.—No. IX. On the Genus *Micropternus*. By Edward Hargitt, F.Z.S. 1
II. On the Muscicapine Genus *Chasiempis*. By P. L. Sclater, M.A., Ph.D., F.R.S. (Plate I.) 17
III. On the Aftershaft in the Feathers of certain Birds. By F. E. Beddard, M.A., F.L.S., Prosector to the Zoological Society of London 19
IV. Ornithological Notes from Corsica. By John Whitehead. (Plate II.) 24
V. On two Birds from Norfolk Island. By H. B. Tristram, D.D., F.R.S. 48
VI. On the Shedding of the Claws in the Ptarmigan and allied Birds. By Leonhard Stejneger 50
VII. On the Birds of Central India.—Part I. By Lieut.-Col. C. Swinhoe and Lieut. Henry Barnes 52
VIII. The Ornithology of St. Kilda. By Charles Dixon. (Plate III.) 60
IX. Notices of recent Ornithological Publications:—
1. Baird, Brewer, and Ridgway on the Water-Birds of North America. 97
2. Barboza du Bocage on Birds from Angola . . . .
3. Barboza du Bocage on West-African Birds . . . . . .
4. Barboza du Bocage on *Cinnyris erikssoni* 98
5. Belding on the Birds of Guaymas . . . .
6. Belding on the Birds of Lower California . . . .
7. Buller on rare New-Zealand Birds 99
8. Cory on the Birds of San Domingo . . . .
9. Coues's new Key to North-American Birds 100
10. Cowan on the Birds of Madagascar 101
11. De Verteuil's 'Trinidad.' (Second edition.) 102
12. De Vis on the Moa in Australia 103
13. Dresser's Monograph of the Bee-eaters . . . .
14. Dubois on a new Parrot from New Guinea . . . . . .
15. Filhol on the Osteology of the Penguins 104
16. Filhol on the Diaphragm of the Penguins . . . .
17. Filhol on the Arterial System of the Penguins . . . . .
18. Gurney on the Arctic Blue-throated Warbler in Norfolk . 105
19. Gurney on the "Hairy" variety of the Moorhen . . .
20. Haast on the Grey Phalarope in New Zealand . . . . .
21. Homeyer and Tancré on the Birds of the Altai 106
22. Jouy on the Birds of Japan. . . . .
23. Lawrence on a new *Hemiprocne* 107
24. Lydekker on Siwalik Fossil Birds . . . .
25. Milne-Edwards on the Fauna of the Antarctic Regions . . 108
26. Murray's 'Vertebrate Zoology of Sind' 109
27. Nutting on Birds from Nicaragua . . . .
28. Przewalski's Journey in Tibet. 110
29. Radde's 'Ornis Caucasica' 111

⁎ [*Contents continued on page 3 of Wrapper.*]

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editors, 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, H. E. Dresser, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

FIFTH SERIES.
Vol. III. No. 10.
APRIL 1885.
Price 6s.

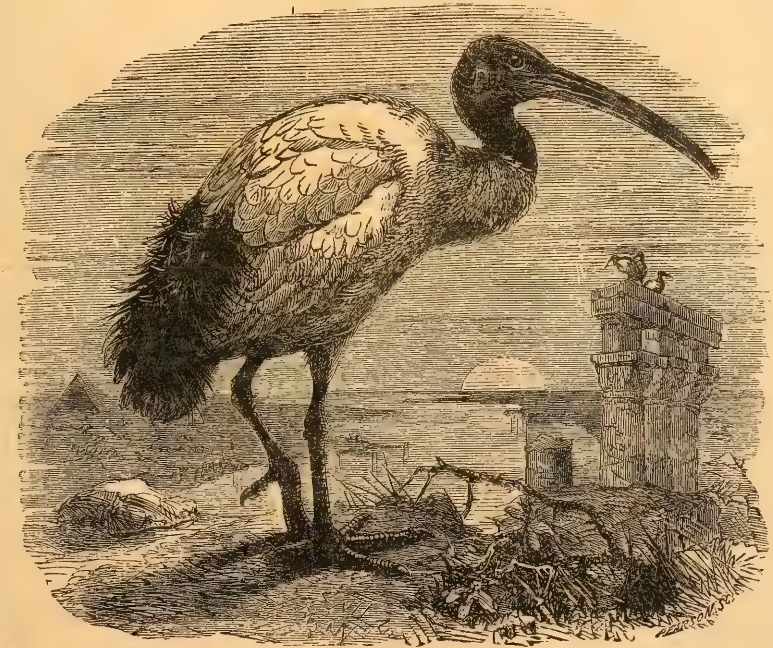
THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY TO THE ZOOLOGICAL SOCIETY OF LONDON,
AND
HOWARD SAUNDERS, F.L.S., F.Z.S.



LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

CONTRIBUTIONS

À LA

FAUNE ORNITHOLOGIQUE DE L'EUROPE OCCIDENTALE.

Recueil comprenant les espèces d'oiseaux qui se reproduisent dans cette région, ou qui s'y montrent régulièrement de passage; augmenté de la description des principales espèces exotiques les plus voisines des indigènes, ou susceptibles d'être confondues avec elles; ainsi que l'énumération des races domestiques.

Par LÉON OLPHE-GALLIARD.

Fascicule premier: ANSERES BREVIPENNES.

Bayonne: Lasserre. Paris: J. B. Baillière et Fils. Berlin:
Friedländer und Sohn. In 8°. 1884.

Now ready, Price 30*s*.

A GENERAL INDEX OF THE FIRST THREE SERIES OF

'THE IBIS,'

1859-1876.

Edited by Osbert Salvin, M.A., F.R.S.

JOHN VAN VOORST, 1 PATERNOSTER ROW.

Now published.

A LIST OF THE DIURNAL BIRDS OF PREY,

WITH REFERENCES AND ANNOTATIONS;

ALSO,

A RECORD OF SPECIMENS PRESERVED IN THE NORFOLK AND NORWICH MUSEUM.

By JOHN HENRY GURNEY.

In 8vo, paper covers 4*s*. 6*d*., cloth 5*s*.

JOHN VAN VOORST, 1 PATERNOSTER ROW, E.C.

Now ready.

A NEW LIST OF BRITISH BIRDS.

A List of British Birds compiled by a Committee of the British Ornithologists' Union. 229 pp. 8vo. Price 10*s*. 6*d*.

London: John Van Voorst, 1 Paternoster Row, E.C.

Members of the British Ornithologists' Union can obtain the above of Mr. R. H. Porter, 6 Tenterden Street, Hanover Square, W., at the reduced price of 7*s*. 6*d*. cash.

CONTENTS OF NUMBER X. (*continued*).

Page
79. Salvadori on the Birds of Shoa 232
80. Saunders's Edition of 'Yarrell's British Birds' . . . .
81. Smithsonian Report for 1882 233
82. Stejneger on Trinomials in Ornithology . . . .
83. Taczanowski's 'Ornithology of Peru' 234
84. Vila on the Ornithology of Gerona . . . .

XX. Letters, Announcements, &c.:—

Letter from M. Léon Olphe-Galliard; Gift of the Salvin-Godman Collection to the British Museum; The Hume Collection of Indian Birds; Ridgway Ornithological Club, Chicago; News from the Caucasus; Black Redstart in Somersetshire; Obituary—Dr. Rüppell, Prof. Severtzoff, Mr. E. W. White, and Mr. E. C. Rye; Mr. J. A. Allen; New Edition of Buller's 'Birds of New Zealand' 235

Publications received since the issue of No. 9, Fifth Series, and not noticed in the present Number.

20. Annual Report of the Museum of Comparative Zoology at Harvard College, Cambridge.

21. Dubois. Revue critique des oiseaux de la famille des Bucérotides. (Bull. Mus. R. d'Hist. Nat. Belgique, tome iii.)

22. Dubois. Remarques sur les Alouettes du Genre *Otocorys*. (Bull. Mus. R. d'Hist. Nat. Belgique, tome iii.)

23. Garman. On the Use of Polynomials as Names in Zoology. (Proc. Boston Soc. N. H. 1884.)

24. Sitzungs-Protokolle des ersten Internationalen Ornithologen-Congresses, Wien, 1884.

25. Lawrence. New Species of Birds of the Families *Tyrannidæ*, *Cypselidæ*, and *Columbidæ*. (Ann. N. Y. Acad. Sci. iii.)

26. Menzbier. Mémoires sur les *Paridæ*. (Bull. Soc. Zool. France, 1884.)

27. Mittheilungen des ornithologischen Vereines in Wien. (Section für Geflügelzucht &c. 1884, Nos. 26, 27, 28; 1885, Nos. 1–25. Section für Vogelkunde &c. 1885, Nos. 1–12).

28. Ridgway. Description of some new Species of Birds from Cozumel Island, Yucatan. (Pr. Biol. Soc. Washington, iii.)

29. Schmidhoffen. *Anas sponsa*, Linn., in Steiermark. (Mitth. ornith. Ver. Wien, 1884.)

30. Schmidhoffen. Bemerkungen über *Acredula caudata*, Linn., und *A. rosea*, Blyth. (Mitth. ornith. Ver. Wien, 1884.)

31. Shufeldt. Osteology of *Ceryle alcyon*. (Journ. Anat. & Phys. xviii.)

32. Shufeldt. On the Osteology of *Numenius longirostris*, &c. (Journ. Anat. & Phys. xix.)

33. Vorderman. Bataviasche Vogels.—Part VI., and Alphabetische Index. Natuurk. Tijds. voor Nederl. Indië, Deel xliv. Afl. 3.)

34. Vorderman. List of Birds from Java. (Natuurk. Tijds. voor Nederl. Indië, Deel xliv.)

35. The Young Oologist. Vol. I. no. 10.

36. Zeitschrift für die gesammte Ornithologie, 1884, Heft 4.

CONTENTS OF NUMBER X.—FIFTH SERIES.

Page
XI. On two new Birds from Borneo. By the Rev. H. H. Slater, B.A. (Plate IV.) 121
XII. On the Birds of Central India.—Part II. By Lieut.-Col. C. Swinhoe and Lieut. Henry Barnes 124
XIII. Notes on some Eastern Owls. By J. H. Gurney 138
XIV. Notes on Woodpeckers.—No. X. On the Genus *Thriponax*. By Edward Hargitt, F.Z.S. 140
XV. A Birds'-Nesting Ramble in Lapland. By Alfred Crawhall Chapman 158
XVI. On a Collection of Birds from the Island of Cozumel. By Osbert Salvin, M.A., F.R.S., &c. (Plate V.) 185
XVII. On a small Collection of Birds from Korea. By H. B. Tristram, D.D., F.R.S. 194
XVIII. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By Osbert Salvin, M.A., F.R.S., &c. (Part I.). 195
XIX. Notices of recent Ornithological Publications :—
48. 'The Auk' 220
49. Baird, Brewer, and Ridgway on the Water-Birds of North America. } 221
50. Berlepsch on the Birds of Bucaramanga. . . . . . . }
51. Bidwell on Sabine's Gull . . . . }
52. W. Blasius on a new Trumpeter . . . . } 222
53. W. Blasius on Grabowsky's latest Bornean Collections. . }
54. W. Blasius on the Breast-bones of Birds . . . . }
55. W. Blasius's third Paper on the Great Auk . . . . . } 223
56. Bogdanow on Russian Ornithology . . . . }
57. British Association's Report on Migration in 1883 . . . } 224
58. Buckley and Harvie-Brown on the Birds of Sutherlandshire }
59. Collett on the Great Auk in Norway . . . . }
60. Cory on the Birds of San Domingo . . . . } 225
61. Dresser's Monograph of the Bee-eaters . . . . }
62. Fischer on the Birds of Masai-land . . . . } 226
63. Glanville's Catalogue of the Albany Museum, Cape Colony }
64. Godman and Salvin's 'Biologia Centrali-Americana' . . } 227
65. Gould's 'Birds of New Guinea'. . . . . }
66. Gurney on the Birds of Norfolk . . . . } 228
67. Hawtayne's Taxidermic Notes . . . . }
68. Henke on the Ostrich-question . . . . }
69. Homeyer on a new Stonechat . . . . } 229
70. Huet on Additions to the Jardin des Plantes . . . . . }
71. Le Moine on Canadian Ornithology . . . . }
72. Meyer on Birds' Nests and Eggs from the East Indies . . } 230
73. 'The Naturalist' . . . . }
74. Olphe-Galliard on the Ornithology of Western Europe . } 231
75–78. Ridgway on American Birds . . . . }

[*Contents continued on page 3 of Wrapper.*]

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editors, 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, H. E. Dresser, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

FIFTH SERIES.
Vol. III. No. 11.
JULY 1885.
Price 6s.

THE IBIS,

A
QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY
PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY TO THE ZOOLOGICAL SOCIETY OF LONDON,
AND
HOWARD SAUNDERS, F.L.S., F.Z.S.

LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31*st March each year,* £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

BRITISH ORNITHOLOGISTS' UNION.

PRESIDENT.

The Right Hon. Lord Lilford.

SECRETARY.

H. E. Dresser, Esq.

COMMITTEE.

The President.
The Editors of 'The Ibis.' } *Ex officio.*
The Secretary.
W. T. Blanford, Esq.
F. DuCane Godman, Esq.
O. Salvin, Esq.

The British Ornithologists' Union was instituted in 1858 for the advancement of the science of Ornithology. Its funds are devoted primarily to the publication of 'The Ibis,' a Quarterly Journal of Ornithology, of which twenty-five volumes have now been completed.

The Union consists of Ordinary Members, Honorary Members (limited to ten), and Foreign Members (limited to twenty).

Ordinary Members pay an admission fee of £2, and a contribution of £1 on election, and £1 on the 1st of January of each subsequent year.

Ordinary Members and Honorary Members are entitled to receive a copy of 'The Ibis' gratis.

Authors are entitled to 25 extra copies of their papers published in 'The Ibis,' on applying for them to the Secretary.

The Election of Members takes place at the Annual General Meeting, held in April or May of each year. Persons wishing to become Members are requested to apply to the Secretary for information respecting Election.

H. E. DRESSER,
Secretary.

6 Tenterden Street, Hanover Square, W.

Now ready.

A NEW LIST OF BRITISH BIRDS.

A List of British Birds compiled by a Committee of the British Ornithologists' Union. 229 pp. 8vo. Price 10*s.* 6*d.*

London: John Van Voorst, 1 Paternoster Row, E.C.

Members of the British Ornithologists' Union can obtain the above of Mr. R. H. Porter, 6 Tenterden Street, Hanover Square, W., at the reduced price of 7*s.* 6*d.* cash.

CONTENTS OF NUMBER XI. (*continued*).

Page
97. Pagenstecher's 'Birds of South Georgia' 319
98. Protocol of the International Ornithologists' Congress } 320
99. Report of the Harvard Museum of Zoology . . . . }
100. Ridgway on new Birds from Cozumel Island 321
101. Rochebrune's 'Birds of Senegambia' 322
102. Saunders's Edition of 'Yarrell's British Birds'. . . } 323
103. Sharpe on the Fringilliformes . . . . }
104. Shufeldt on the Osteology of *Ceryle alcyon* . . . . } 325
105. Shufeldt on the Osteology of *Numenius longirostris* . }
106. Traquair on Biological Nomenclature . . . . }
107. Tschusi zu Schmidhoffen on the Long-tailed Tits of Europe . . . . } 326
108. Tschusi zu Schmidhoffen on the Summer Duck in Styria }
109. Vorderman on the Birds of Batavia . . . . }
110. Vorderman's 'List of Javan Birds' . . . . }
111. 'The Young Oologist' 327

XXXIII. Letters, Announcements, &c. :—

Letters from the Rev. H. H. Slater and Mr. Osbert Salvin; Anniversary of the British Ornithologists' Union; New Ornithological Work; Prjevalsky's New Expedition; The Ridgway Ornithological Club, Chicago, U.S.A.; Birds breeding in Ants' Nests; Birds at Scotch Lighthouses; Mr. R. B. Sharpe's Departure for Simla; Obituary—Mr. Ernest William White, Dr. Eduard Rüppell, and Richard Boehm; News of Dr. Finsch; New Expeditions; New Work on the Swallows 327

PUBLICATIONS RECEIVED SINCE THE ISSUE OF No. 10, FIFTH SERIES, AND NOT NOTICED IN THE PRESENT NUMBER.

37. BECKHAM. Notes on some of the Birds of Pueblo, Colorado. (The Auk, vol. ii.)

38. BLOMEFIELD. Reminiscences of William Yarrell. (8vo. Bath, 1885.)

39. CORY. A List of the Birds of the West Indies. (4to. 1885.)

40. DUBOIS. Revue des Oiseaux observés en Belgique. (Bull. Mus. R. d'Hist. Nat. Belgique, iv. 1885.)

41. MITCHELL. The Birds of Lancashire. (8vo. 1885.)

42. Mittheilungen des ornithologischen Vereines in Wien. (Section für Geflügelzucht &c. 1885, Jahr. 2, Nos. 11–14. Section für Vogelkunde &c. 1885, Jahr. 9, No. 4.)

43. NATHUSIUS. Ueber die charakteristischen Unterscheidungszeichen verschiedener Straussen-Eier. (J. f. O. 1885.)

44. NEHRKORN. Zur Avifauna der Insel Waigeu. (J. f. O. 1885.)

45. Ornithologist and Oologist. Vol. x. no. 5.

46. SALVADORI E GIGLIOLI. Due nuove specie di Uccelli della Cocincina. (Atti R. Accad. Sci. Torino, xx. 1885.)

47. SHUFELDT. Variations in the Form of the Beak, that take place during its Growth, in the Short-tailed Albatross. (The Auk, vol. ii.)

48. STEJNEGER. Remarks on *Lanius robustus*. (Proc. Acad. Nat. Sci. Philad. 1885.)

49. TAIT. As Aves em Portugal. Parts 1–3. (Revista da Sociadade de instrucção do Porto, 1883–84.)

CONTENTS OF NUMBER XI.—FIFTH SERIES.

Page

XXI. Winter Notes from Morocco. By Capt. S. G. Reid . . . 241

XXII. On the Geographical Distribution of Birds in European Russia north of the Caucasus.—Part II. Rapaces Nocturnæ. By M. Menzbier 255

XXIII. Notes on the Breeding-habits of certain Sea-Birds frequenting Norfolk Island and the adjoining Islets. By W. M. Crowfoot, M.D. 263

XXIV. On the Cormorants of Japan and China. By Henry Seebohm 270

XXV. On some little-known Species of Tanagers. By P. L. Sclater, M.A., Ph.D., F.R.S. (Plate VI.) 271

XXVI. Notes on the Birds of Paisandú, Republic of Uruguay. By Ernest Gibson, F.Z.S. (Communicated by J. J. Dalgleish.) 275

XXVII. Notes on the Birds of the Genus *Homorus* observed in the Argentine Republic. By W. H. Hudson, C.M.Z.S. . . 283

XXVIII. On the Coloration in Life of the naked Skin-tracts on the Head of *Geococcyx californianus*. By Dr. R. W. Shufeldt, U.S. Army, Memb. of the Am. Ornith. Union, &c. (Plate VII.) 286

XXIX. Descriptions of three new Species of Birds from South America. By Hans von Berlepsch 288

XXX. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By Osbert Salvin, M.A., F.R.S., &c. (Continued.) (Plate VIII.) 291

XXXI. Review of the Species of the Family Coliidæ. By Capt. G. E. Shelley, F.Z.S. 307

XXXII. Notices of recent Ornithological Publications:—

85. Cory's 'Birds of San Domingo' . . . .
86. Dresser's Monograph of the Bee-eaters. . . . . . } 314
87. Dubois on the Genus *Otocorys*. . . . .
88. Dubois on the Hornbills . . . .
89. Garman on Polynomials in Zoology . . . . } 315
90. Gould's 'Birds of New Guinea' . . . .
91. Gould's 'Supplement to the *Trochilidæ*' . . . . . } 316
92. Langille on North-American Birds . . . .
93. Lawrence on new Species of *Tyrannidæ*, *Cypselidæ*, and *Columbidæ* . . . .
94. Menzbier on the Blue Tits . . . . } 317
95. 'Mittheilungen' of the Ornithological Union of Vienna
96. Newton on Ornithology . . . . } 318

[*Contents continued on page 3 of Wrapper.*]

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editors, 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, H. E. Dresser, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

FIFTH SERIES.
Vol. III. No. 12.

OCTOBER 1885.

Price 6s.

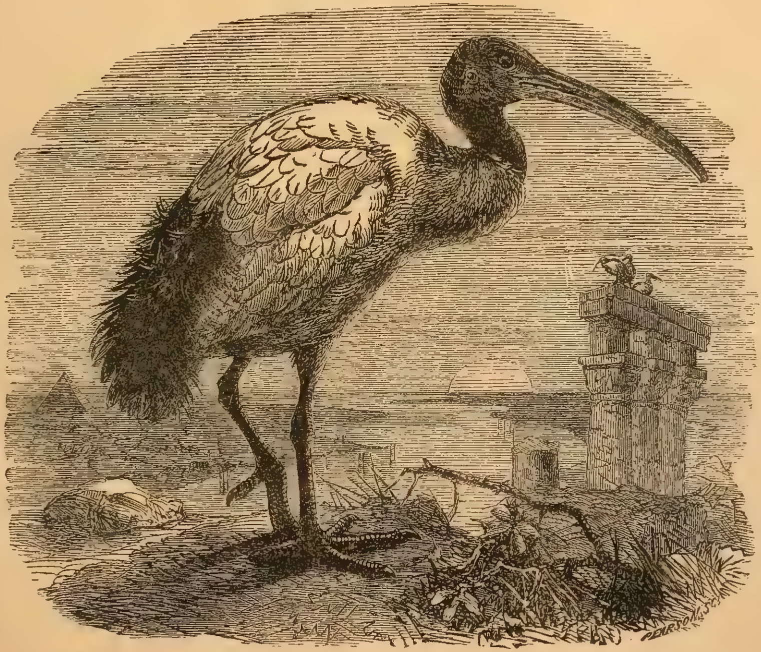
THE IBIS,

A

QUARTERLY JOURNAL OF ORNITHOLOGY.

EDITED BY

PHILIP LUTLEY SCLATER, M.A., Ph.D., F.R.S.,
SECRETARY TO THE ZOOLOGICAL SOCIETY OF LONDON,
AND
HOWARD SAUNDERS, F.L.S., F.Z.S.



LONDON:
JOHN VAN VOORST, 1, PATERNOSTER ROW.

Annual Subscription, payable before 31st March each year, £1 1s.

TAYLOR AND FRANCIS, PRINTERS,] [RED LION COURT, FLEET STREET.

BRITISH ORNITHOLOGISTS' UNION.

PRESIDENT.

THE RIGHT HON. LORD LILFORD.

SECRETARY.

H. E. DRESSER, ESQ.

COMMITTEE.

THE PRESIDENT.
THE EDITORS OF 'THE IBIS.' } *Ex officio.*
THE SECRETARY.
W. T. BLANFORD, ESQ.
F. DUCANE GODMAN, ESQ.
O. SALVIN, ESQ.

The BRITISH ORNITHOLOGISTS' UNION was instituted in 1858 for the advancement of the science of Ornithology. Its funds are devoted primarily to the publication of 'THE IBIS,' a Quarterly Journal of Ornithology, of which twenty-seven volumes have now been completed.

The Union consists of Ordinary Members, Honorary Members (limited to ten), and Foreign Members (limited to twenty).

Ordinary Members pay an admission fee of £2, and a contribution of £1 on election, and £1 on the 1st of January of each subsequent year.

Ordinary Members and Honorary Members are entitled to receive a copy of 'THE IBIS' gratis.

Authors are entitled to 25 extra copies of their papers published in 'THE IBIS,' on applying for them to the Secretary.

The Election of Members takes place at the Annual General Meeting, held in April or May of each year. Persons wishing to become Members are requested to apply to the Secretary for information respecting Election.

H. E. DRESSER,
Secretary.

6 Tenterden Street, Hanover Square, W.

Now ready.

A NEW LIST OF BRITISH BIRDS.

A List of British Birds compiled by a Committee of the British Ornithologists' Union. 229 pp. 8vo. Price 10*s.* 6*d.*

London: JOHN VAN VOORST, 1 Paternoster Row, E.C.

Members of the British Ornithologists' Union can obtain the above of Mr. R. H. Porter, 6 Tenterden Street, Hanover Square, W., at the reduced price of 7*s.* 6*d.* cash.

CONTENTS OF NUMBER XII. (*continued*).

Page
144. Schalow on the Birds of Mark Brandenburg . . . .
145. Schiavuzzi on Northern Birds in the Adriatic . . . 451
146. Stejneger on *Lanius robustus* . . . .
147. Stejneger on a new Sparrow . . . .
148. Taczanowski on Abnormal Moults 452
149. Tait on Portuguese Birds . . . .
150. Zeledon on the Birds of Costa Rica . . . .

XLIV. Letters, Announcements, &c.:—

Letter from Mr. H. E. Dresser; Additions to the Bird-collection of the British Museum in 1884; The Hume Collection of Indian Birds; The Development of the Avian Sternum; More News of Dr. O. Finsch; Habits of Raggi's Paradise-bird; Recent Appointments in the United States 453

Index 465

Titlepage, Preface, List of Members, and Contents.

Publications received since the issue of No. 11, Fifth Series, and not noticed in the present Number.

50. Berlepsch and Jhering. Die Vögel der Umgegend von Taquara do Mundo Novo, Prov. Rio Grande do Sul. (Zeitschr. f. d. gesammte Ornithol. 1885.)

51. Blasius. Naturhistorische Studien und Reiseskizzen aus Schweden und Norwegen im Frühjahre 1884. (Mitth. d. ornithol. Vereins in Wien, 1884.)

52. Blasius. Naturhistorische Studien und Reiseskizzen aus der Mark und Pommern. Parts i., ii. (Monatschr. deutsch. Ver. zum Schutze d. Vogelwelt, 1884, Nos. 7–10.)

53. Büttikofer. Zoological Researches in Siberia. (Notes Leyden Mus. 1885.)

54. Dixon, C. Evolution without Natural Selection. (London, 1885.)

55. Evans, W. Notes on the Birds of the Island of Eigg. (Proc. R. Phys. Soc. Edinburgh, vol. viii.)

56. Evans, W. Note on the Breeding of the Marsh Titmouse in Stirlingshire in 1884. (*Ibid.*)

57. Giglioli, H. Il primo Congresso Ornitologico Internazionale tenuto a Vienna dal 7 al 14 Aprile, 1884. Colle proposte per attuare il programma del Comitato internazionale ornitologico permanente in ciò che riguarda l' Italia. Roma, 1885.

58. Mittheilungen des ornithologischen Vereines in Wien. (Section für Vogelkunde, &c. 1885. Jahr. 9, Nos. 8–15.)

59. Oustalet, E. Rapport sur le Congrès et l'Exposition Ornithologiques de Vienne en 1884. (Paris, 1885.)

60. Oustalet, E. Description de deux espèces nouvelles faisant partie de la Collection Ornithologique du Muséum d'Histoire Naturelle de Paris. (Extr. du Journal 'Le Naturaliste,' 1885.)

61. Salvadori e Giglioli. Due nuove specie di Picchi. (Atti R. Accad. Sci. Torino, vol. xx.)

62. Ornis. Internationale Zeitschrift für die gesammte Ornithologie. (Wien, 1885. 1 Heft.)

CONTENTS OF NUMBER XII.—FIFTH SERIES.

Page

XXXIV. Additional Notes on the Ornithology of Transvaal. By Thomas Ayres. Communicated by John Henry Gurney 341

XXXV. On the Birds of the Upper Tarim, Kashgaria. By M. Menzbier. 352

XXXVI. Further Notes on the Ornithology of St. Kilda. By Charles Dixon 358

XXXVII. Note on *Baza ceylonensis*, Legge. By Samuel Bligh. Communicated by J. H. Gurney 362

XXXVIII. Further Contributions to the Ornithology of Japan. By Henry Seebohm. 363

XXXIX. An Autumn Ramble in Eastern Iceland, with some Notes from the Faröes. By Wm. Eagle Clarke, F.L.S., and James Backhouse, Jun. (Plate IX.) 364

XL. Stray Ornithological Notes. By W. Edwin Brooks . . 380

XLI. On Mr. E. Lort Phillips's Collection of Birds from Somaliland. By Capt. G. E. Shelley, F.Z.S. (Plates X.–XII.) 389

XLII. A List of the Birds obtained by Mr. Henry Whitely in British Guiana. By Osbert Salvin, M.A., F.R.S., &c. (Continued.) 418

XLIII. Notices of recent Ornithological Publications:—

112. 'The Auk' 440
113. Blomefield's 'Reminiscences of Yarrell' 441
114. British Association's Report on Migration in 1884 . . 441
115. Buckley on the Birds of Rousay, Orkney Islands . . . 442
116. Bunge on Birds of the Delta of the Lena 443
117. Cory's 'List of the Birds of the West Indies' . . . 443
118. Dubois on Belgian Birds 443
119. Dybowski and Taczanowski on the Birds of Kamtschatka 444
120. H. O. Forbes on the Eastern Archipelago 444
121. Harvie-Brown on Kumlien's Gull 445
122. Meyer on new Birds in the Dresden Museum . . . 445
123. Mitchell's 'Birds of Lancashire' 446
124. More on Irish Birds 446
125. Nehrkorn on Birds from Waigiou 447
126. 'Ornithologist and Oologist' 447
127. Reid on the Birds of Bermuda 447
128–142. Ridgway on American Birds 448
143. Salvadori and Giglioli on new Birds from Cochin China . 450

[*Contents continued on page 3 of Wrapper.*]

Covers for binding last year's Volume may be had on application to the Publisher.

Communications may be addressed to the Editors, 6 Tenterden Street, Hanover Square, W. Advertisements &c. to the Publisher, John Van Voorst, 1 Paternoster Row, London, E.C.

Members of the B. O. U. are requested to keep the Secretary, H. E. Dresser, Esq., 6 Tenterden Street, Hanover Square, W., informed of any change of Residence, so that the Numbers of 'The Ibis' may be sent to them without delay.

The Ibis 1885 Vol.3, Ser

APR. 69
N. MANCHESTER,
INDIANA

AMNH LIBRARY
100109451